THE BOOK OF HOBBIES

CHARLES WILLIAM TAUSSIG
& THEODORE ARTHUR MEYER

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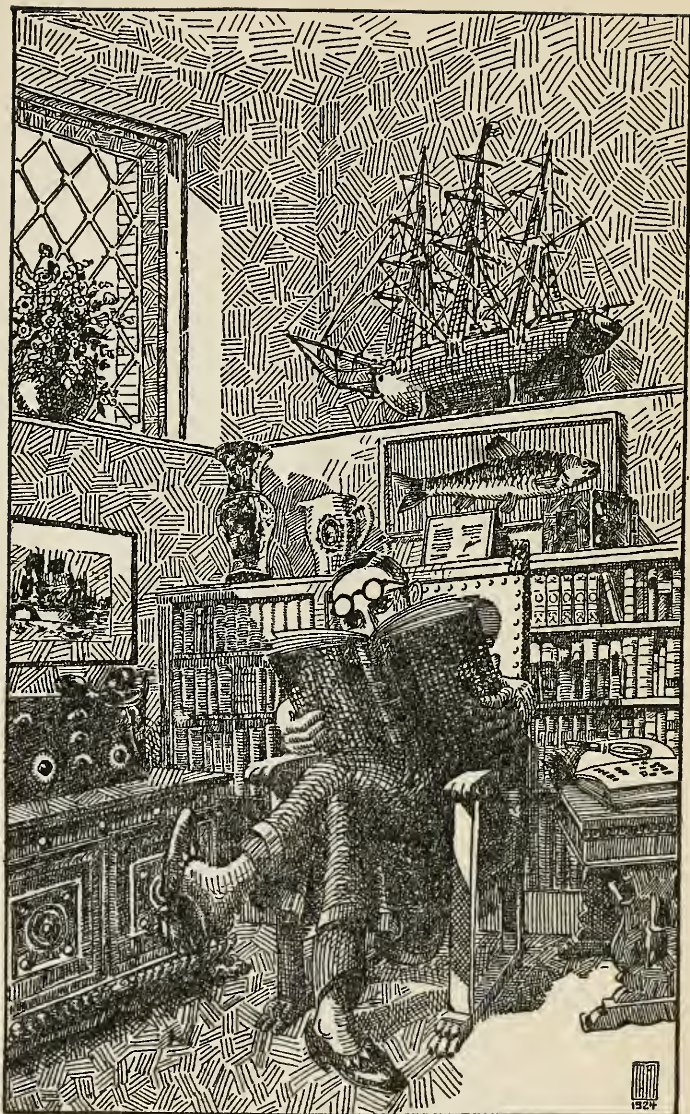
1924

THE BOOK OF HOBBIES

OR

A GUIDE TO HAPPINESS

By CHARLES WILLIAM TAUSSIG
and
THEODORE ARTHUR MEYER

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FOREWORD

A FIRST impression that an American acquires of the average English business man, is the apparent lack of interest taken in his daily work. The buoyant, spirited, intensive attention which the American gives to his business is largely lacking in his English cousin, and this rather astonishes and shocks the American. On closer observation, however, the American is surprised to note that, notwithstanding the seeming inattention and absence of interest in business on the part of the Englishman, English business is the most firmly founded and established in the world. Rarely does one find an Englishman bringing home with him his business troubles, or, for that matter, his business triumphs. Trade, to him, is a means of livelihood, and not a thing to be mulled or gloated over at home. Business is a means to an end, that end being the reasonable enjoyment of life. True, Americans probably accomplish more, in a given length of time, than people of any other nation. But, alas, it is also true that there is an overwhelming number of prematurely old, neurotic Americans. Americans, particularly in the larger cities, live too intensely and rapidly.

A large percentage of Englishmen have one

or more hobbies, that is, they have some form of divertissement in which they take an "extravagant interest," an interest which affords them much pleasure, and serves completely to lift them out of the rut of ordinary business life. Many Englishmen are given to outdoor hobbies, such as angling and sports. Many are collectors of books, prints, paintings, antiques, etc. Almost all of them have some absorbing interest other than their means of livelihood.

The American business man is awakening to the need of other pleasurable interests in life besides the pursuit of wealth, and more and more do we find him joining the ranks of happy hobbyists.

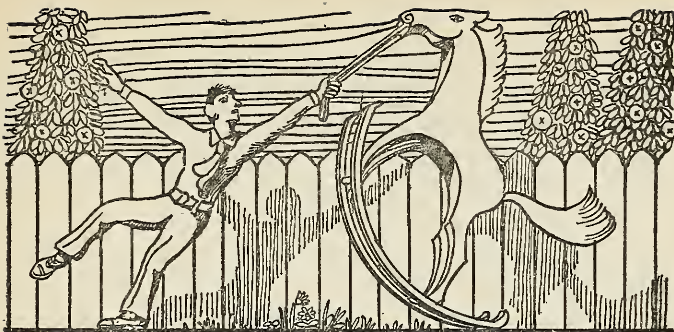
Hobbies are being prescribed to-day for the tired business man, business woman and housewife, by physicians. They have proven to be more effective prescriptions, in most cases, than drugs and medicines. There are many men and women who are craving for some diversion, something which will interest them and keep their minds from constantly dwelling on their daily labors. The purpose of this book is to provide for such an outline of a few of the most enjoyable hobbies, and to impress upon the reader that ineffable atmosphere that surrounds a hobby.

There are many books that deal with special types of hobbies: books on sports, books on collecting, books on manual work, books on radio, philately, etc. But these are for the man who

has already selected his hobby or hobbies. There has been, heretofore, no book that deals in detail with various types of hobbies that are sufficiently different to afford a real choice to the prospective hobbyist, or to enable a man who already has a hobby to choose an additional one of different nature or to understand his friend's hobby if it differs from his own.

Each chapter, devoted to a separate hobby, contains sufficient information to enable the reader to ascertain if the hobby will please him, and if so, to derive such instruction therefrom that he may intelligently adopt it.

The bibliographies included in this book will materially aid the reader in securing more detailed information concerning each particular hobby.



MOUNT YOUR HOBBY!

THE smoking room of a Pullman car is where the modern Decameron is unfolded. Something of the atmosphere that Boccaccio found in the palace sanctuary is to be found in the average Pullman smoker any evening when a group of traveling men get together. Stories weird, romantic, ridiculous, fantastic, obscene, humorous and otherwise, flow glibly from the tongues of the narrators. At times, philosophy, such as was never expounded in the groves of Athens, occupies the evening's program.

We recall one evening, en route from Salt Lake City to San Francisco, the question arose in the smoking room as to the most important things in a man's life. Stoic and epicurean principles were battered here and there, until some one suggested that man be considered entirely divorced from his normal surroundings, where his instincts would naturally come to the

surface. He offered this proposition, "Consider for a moment that each of you has been stranded alone on the proverbial desert island, with little hope of rescue—what would you do? How would you reorganize your life?" The first man to answer said, "My prime consideration would be for food; my second for clothing and shelter; my third, the possibilities of a female companion, and my fourth, something with which to occupy my spare time." The second man answered in a similar vein, but laid less stress on the "female companion," and emphasized that spiritual contemplation of God would be among his paramount concerns. The others each in their turn expressed the sentiments of the first two, with varying degrees of emphasis on the material and the spiritual. All agreed that one of the requirements for a tolerable existence alone on a desert island would be something to do, other than that which was essential to their physical well-being.

On further questioning, one decided that his pastime would be collecting odd-shaped stones. Another would make primitive traps and fishing implements and go in for trapping and fishing as a sport as well as for sustenance. Another said that he would collect strange and rare flora, a hobby which he even now indulged in. Still another would systematically search the island for relics of a past civilization and make a collection of what he found. One man, mechanically inclined, said he would fashion

crude tools and build ship models. Another, who was a naturalist, thought he would catch and tame wild animals and birds. They were unanimous that one of the four essentials in a primitive life, such as was hypothesized, was to have a hobby.

Now it seems to us that it is just as important to develop the hobby instinct in the normal life of to-day, as it would be in the case of the above supposed catastrophe.

THREE TYPES OF HOBBIES

"Something in which one takes an extravagant interest," is how the dictionary defines "hobby." To have an extravagant interest in almost anything is to have a decidedly pleasant view of life. Happy is he who has a hobby, something with which actively to occupy the mind and to take it away from the necessary worries of the work-a-day world.

Hobbies, intrinsically, may or may not be of value. It matters little anyway, for it is not the intrinsic value that counts, but rather the beneficial effect on the subject.

There are three fundamental types of hobbies: the acquiring of knowledge, the acquiring of things, and the creating of things. These groups are not well defined and are at times intermingled, but they do stand out as the fundametal types.

The acquiring of knowledge as a hobby is the

serious work of the world's greatest thinkers. Socrates, Plato, Newton and Darwin found learning to be the all-absorbing passion of their lives. In the case of Darwin, however, there is also to be found the "extravagant interest" of acquiring things or collecting.

The second group is perhaps the most general type of hobby manifesting itself at the present time. Collecting is one of the earliest of all hobbies, and can be said to be almost instinctive. There is little doubt that collecting, or the desire to acquire things, is often nothing more than a perversion of the instinct of acquiring the means of sustenance. It has been handed down through the ages from the prehistoric man who collected sea shells and pebbles for no apparent purpose, to the man of enormous wealth to-day who collects a great library of rare books which he has neither time, inclination nor ability to read, and which he keeps under close lock and key, unthinkingly keeping away those who would be able to utilize the great collection. Yet, with rapture and over-running enthusiasm, this man will pace the floor of his secluded library gloating over his magnificent collection. Perhaps you may think we have painted the picture of a selfish, unmoral man, but on the contrary, he is probably the most human, righteous and kindly of men, mellowed in fact by the seemingly selfish, purposeless hobby of collecting books. No matter what his troubles of the day may be, they softly slip away in the warm glow

of his fireside, as he lovingly fondles his latest acquirement, perhaps an ancient Greek manuscript which he cannot read, but which he holds in his hand with something of the affection and love which he might bestow upon his little child.

No, there is something mysteriously fine about collecting books or almost anything that is in no wise related to the intrinsic value of the object. Of course, we cannot for a moment overlook the real value of a collection of books, and despite himself, the collector will eventually give to the world something of permanent value. This is but a secondary consideration to the collector himself, if a consideration at all.

The third group of hobbies is that of creating things. It could almost be pared down to creating things with the hands. It is this type of creative work that usually develops into a hobby. Manual work, while often an arduous vocation, is usually a most attractive avocation. To create with one's own hands something out of apparently nothing, is a great satisfaction. To watch it gradually grow under the magic of our touch has something of the miraculous and leaves with us a sense of power, which though developed in the creating of something useless, may be used, and is often used, in the development of something serviceable. The creative hobby is found in children almost in the same degree as is the collecting impulse. It is particularly desirable to encourage in them the will

and ability to create with their hands. It is decidedly an effective deterrent to the destructive urge present in most normal children. It incurs in them a wholesome respect for that which has been created by others.

To our mind, the most pathetic utterance of man, which unfortunately is heard so often, is, "I have nothing to do." Be the man who so remarks as rich as Crœsus, as powerful as Cæsar, or as wise as Solomon, he can be classed but a failure. His failure lies in his mental attitude, which permits even momentarily, life, with its myriads of duties, pleasures and amenities, to pall. The man with a hobby never has "nothing to do." Rather has he far too little time to do all that he is moved to accomplish. Frequently he feels the scourge of ambitions impossible of fulfilment, but it is a scourge that causes wistful smiles, rather than bitter tears.

It is the amenities of life on which we should fall when wearied and in doubt. There is in every man, no matter what his situation, an instinctive something that needs but an inner consciousness of its existence to be fanned into a flame of glowing warmth that will sustain him against the cold realities of life. Perhaps this something is just Fancy, who so beautifully defines herself:

"Forms that men spy
With the half shut eye
In the beams of the setting sun, am I."

Fancy is just another name, a more beautiful name, for hobby. For, as prosaic as a particular hobby may seem to him who does not possess it, to the holder of this fancy it has an indefinable, wraithlike appeal.

That indulgence in a hobby does not require extraordinary means will perhaps be a surprise to many, a particularly pleasant surprise to those who have let this bugaboo deter them from yielding to their fancy. "But," we hear from the many, "it takes money to buy books, to collect etchings, to accumulate antiques, to build furniture, to make radio sets, to buy materials for weaving tapestry, and for the many other things we desire to do." So it does, and there *are* some hobbies with which the man of average means cannot play. The most expensive of fancies are those in the "collecting" group. But, fortunately, interest and enjoyment in a hobby are not in ratio to the amount of money spent. Quite as much pleasure is had by the collector of modern first editions at reasonable prices as is had by the more advanced collectors who find their Eldorado in a first edition of Shakespeare.

And looking at the question of cost from another angle, how few people really know the true value of money or how to spend it. "Keeping up with the Joneses" is the theme of much family budgeting. Emerson so wisely says, "A man's money should not follow the direction of his neighbor's money, but should represent to him the things he would willingest do with it. I

am not one thing, and my expenditure another. My expenditure is me. That our expenditure and character are twain, is the vice of society. We must not make believe with our money, but spend heartily and buy up, and not down."

And so, with proper appreciation of the value of a hobby and a revaluing of his fortune in terms of happiness and goodness, he will find himself quite capable of following his fancy.

"A man's money should not follow the direction of his neighbor's money." So it can be said of a hobby—a man should not choose his neighbor's hobby, unless, of course, it is naturally his also, for there can be no grafting of some one else's fancy into his life. Neither should a husband feel the need to follow his wife's hobby. Paradoxical as it may seem, husbands and wives with entirely different hobbies usually have the happiest and sweetest of lives together. Perhaps it is partially because no matter how different the objects of their hobbies may be, the fact that they have hobbies makes them akin, and, therefore, in reality the husband and wife are bound by a mutual interest.

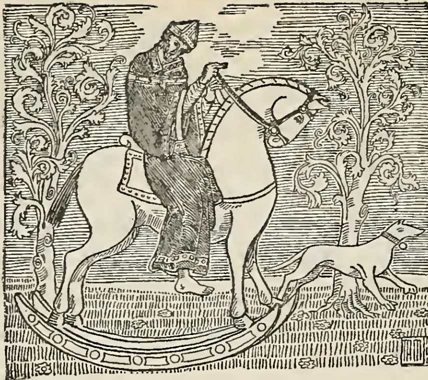
Neither a man's vocation, nor his avocation, should be anything in which he has not a deep-seated and ardent interest. Unless there be an abiding urge to do something, to study something or create something, there can be no personal gain. As Shakespeare puts it,—

"No profit goes where is no pleasure ta'en:
In brief, sir, study what you most affect."

Usually, of course, a man has a number of different fancies, in which case he should naturally seek that which most easily fits into his life. The succeeding chapters in this book are written to assist those who wish to mount their hobbies.

Although not essential, it is wise to embrace as a hobby a subject that has little relation to the vocation. Usually, a man's business is unfortunately chosen solely for economic reasons, and if he is dependent entirely upon it, he needs have at times concern for its welfare and his own. This does not lead to the beneficent tranquillity of mind that is to be found in the real hobby, so rather should he seek as his avocation something that will enable him to shake off at times the worries and troubles of business. This is one of the most desirable features of having a hobby.

There are many who feel the need for some interest outside of business, but do not seem able to decide upon any particular field of activity. It is for this purpose that the present book has been written. In it are outlined the most important hobbies and the necessary information required to embark in them. General information is required before a man can take up any hobby. This information is supplied here in outline form, as well as a general dissertation on what is being done in the particular line of work and sources from which additional information can be secured.



Collecting Prints

Etchings, Aquatints, Engravings, Mezzotints, Wood-Cuts and Lithographs.

"I may not know much about art,—
but I know what I like."
—*Gelett Burgess.*

ALMOST all travelers in Europe are fascinated by the beautiful village of Lauterbrunnen in Switzerland. It is situated on both sides of the sparkling Lütschine, in a rocky valley about a half-mile wide. Here is to be found some of the finest mountain scenery in all Europe. The first impression of the place on a summer's day is of a cool valley in a fair land, redolent with the perfume of mountain verdure. To the left, as one looks south, towering above the sinister precipices of the Schwartze Mönch, is the ever-radiant Jungfrau, her dazzling crown of snow gently touching the blue sky. To the right, girdled with mighty rocks, is the exquisite Breithorn, while in front of us, heaped rock upon rock, are sober, sullen mountains frowning upon the valley, mountains at whose hearts some-

thing seems to gnaw. Perchance it is the poignancy of their futile longing for the lovely Jungfrau.

Gazing at this mighty panorama one is overwhelmed with emotions impossible of description. Wonder, reverence and awe may describe the surface feelings, but deeper, far deeper, is a sentiency that cannot be immured in mere words. How one would love to take away with him something of their ineffable beauty! This was the thought that passed through our minds as we took our last look and boarded the train for Interlaken, the first leg of our long journey home to New York.

Two weeks later, we were in the humdrum grind of city life, with sea and mountains but a faded shadow on our mental horizon. One day, our work took us to the Public Library at Forty-second Street to look up some references. Upon concluding, we thoughtlessly wandered into the print room and with little interest glanced here and there at the etchings. We were about to leave when a certain picture stopped us. There was a blink of our eyes and we were standing on the platform of a little railway station in Switzerland. The picture in front of us was D. S. McLaughlin's etching, entitled "Lauterbrunnen." Now it was not the physical accuracy of the etching that brought us up with a start. A photograph, far more definite as to details, would not have done that. It was, indeed, the fact that the artist had imprisoned on that sheet

of paper the emotions impossible of articulation that we had felt when viewing the scene. For the first time we realized precisely what the art of the etcher was at its highest. This was the impetus which started us in that delightful hobby, the collecting of prints.

People become fanciers of prints for many other reasons. Perhaps one of the most usual ways of sowing the seeds for this hobby happens during the annual spring cleaning in the well-regulated household. After many years of screwing up courage, Madame decides to attack the attic with dust rag and vacuum cleaner, as well as a mind made up ruthlessly to discard the heritage of useless souvenirs and heirlooms. Into the waste heap they go, one by one, bundles of letters tied with blue ribbons, the high school diploma, old newspapers, antiquated school-books, canceled vouchers twenty years old, a bustle, the spring hat of eighteen ninety-eight, and other items too numerous to mention. But a portfolio of old steel engravings is laid aside for further consideration. Upon perusing, it is decided to keep them. That evening, when Monsieur comes home, he is invited to look at the find. There is among them an interesting head of Leonardo da Vinci, an engraving of the death of Cleopatra, and many others. Madame seems pleased and Monsieur, looking at Cleopatra, remarks, "I may not know much about art,—but I know what I like." And so a new family of print collectors is born. The artistic

friend is invited to call, and much to the delight of the now enthusiastic print collectors, he recognizes "The Head of Leonardo da Vinci" by Pietro Anderloni (1784-1849), and "The Death of Cleopatra" by Johann Georg Wille (1715-1808) and many other engravings that are of some value.

The field of print collecting is so large that volumes could easily be devoted to each of the many divisions. In this chapter we shall attempt to lay before the prospective collector the essential information that a beginner should know. We shall leave him at the crossroads, where he may choose the particular direction into which his taste or fancy would lead him.

Print collecting can be undertaken in one of several ways, viz., collecting one or more kinds of prints, such as woodcuts, etchings, lithographs, engravings, mezzotints, aquatints or drypoints; or, choosing subjects, such as the collecting of marines, Americana, hunting scenes, and other special subjects; or, specializing in a particular artist; or, perhaps one's fancy runs in epochs and certain centuries have a particular appeal, in which case the collecting of prints according to periods is desirable. It is well to have some fairly definite idea, soon after starting the collection, and to provide a plan of procedure, recognizing the fact that it is well nigh imperative to specialize.

It is evident that the above is by no means a complete catalogue of the possible variations in

the systems of collecting prints. We can think of such delightful pursuits as book-plate collecting, which, however, while indisputably a branch of print collecting, is almost a separate hobby in itself, or is sometimes associated with book collecting. Postage stamps are prints, but collecting of stamps is known by the name of philately.

Prints then, as we understand them in this chapter, are impressions in ink on paper or other material, made by contact with pictures drawn, carved, etched or engraved by the artist on wood, stone, metal or composition. We will not discuss prints in their chronological order, but rather in the order of present-day popularity, the first of which, of course, is the etching. A little knowledge of the process involved in the making of etchings will be of great assistance to the new collector in mastering some of the essentials of proper appreciation.

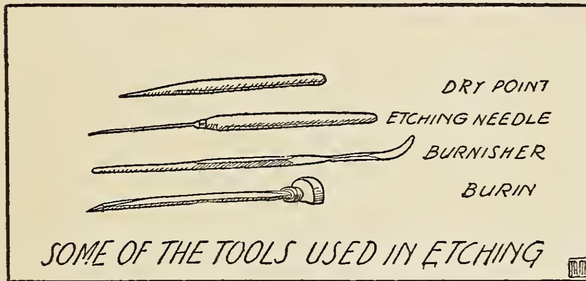
ETCHINGS

The artist makes his drawing on a coated metal plate, either from his previous sketch or direct from nature, using a needle which scratches the surface, or coating, of a wax-like composition. After the picture has been scratched on the coating, the plate is immersed in an acid bath. The acid bites into the metal, where the coating has been scratched away, resulting in the formation of depressions in the

"REMBRANDT'S MOTHER," BY REMBRANDT.
Etching, 147 mm. x 130 mm.

"THAMES POLICE" (WAPPING WHARF), BY WHISTLER.
Etching, 5⅞" x 8⅞".

plate, corresponding to the lines of the drawing. The plate is re-varnished or coated, in order to permit some of the lines to be deepened in the next acid bath, and the process repeated until the various lines have their proper relative depth. The etched plate is then coated with a special ink, after which it is wiped off, leaving the ink only in the depressions. The plate is now placed in a press, and a sheet of moistened paper laid over it. Blankets form a bed under the



SOME OF THE TOOLS USED IN ETCHING

plate, and also over the paper, to which the weight of the roller is applied. On removing the paper, the ink is sucked up out of the depressions, and a reversed impression, slightly embossed, is left on the paper.

Some artists do their own printing, while others have that process performed by professional printers under the artist's supervision. Whistler, generally considered the master of modern etching, did practically all of his own printing. Joseph Pennell is another who does

his own printing, and the list is indeed long, of those who carry out their own etching from coating to signature. It is in this respect that the making of etchings differs from any other printing process and particularly from the modern mechanical methods of reproducing large quantities of pictures by printing. It will readily be seen that the artist has complete control over his prints, and by judicious distribution of his ink, can register at will whatever effect he wishes to have in the finished picture.

When an etching is made, and the first proof pulled, the artist examines it critically and decides what changes or improvements are necessary. He then retouches the plate, adding lines here, strengthening others there, and burnishing (erasing) others in places where he considers it essential. Another proof is taken, and the process is repeated until he attains the result desired. These proofs are what are known as "states." The first state is the print or prints taken from the plate before any retouching has been done. The second state is that following, and so on. Obviously, the early states are ordinarily rarer than the final ones, and generally fetch higher prices. Recognizing this, some artists make it a point to pull several proofs from the plate at successive states. It has happened that the last state is less artistic than a previous one, due to the artist having over-estimated the possible improvements that could be made.

It must also be borne in mind that the early

prints from a plate are sharper, clearer and snappier than those taken off as the plate is worn. Some etchings are limited in the number of impressions taken, and each proof is signed by the artist and numbered, after which the plate is destroyed, insuring only the satisfactory, crisp proofs sought by the artist. There is a limit to the number of good proofs to be had from any plate; this varies according to the vigor of the etching. Delicate lines are sooner worn away in the process of printing, while heavy ones too lose much of their charm.

This simple outline of the process of making an etching clearly shows that the artist has full control over his work until it has finally dried on the paper. Every successive print varies slightly from its predecessor, and consequently, added charm is found by collectors in picking out the most pleasing copies of a particular etching.

A knowledge of art on the part of the would-be collector, while desirable, is not essential. It will not be long before enough knowledge is acquired to add appreciably to the pleasure of this hobby. Any one who would choose the collecting of etchings as his hobby would naturally be the possessor of that mite of knowledge that would suffice in the beginning.

While it is true of etchings, as of anything else, that works of mediocrity and inferiority find their way into the hands of the collector, much may be said in favor of an error in judgment of

the print collector, compared with one on the part of those who collect other works of art. In the first place, the fact that they are pictures in black and white lessens the danger of the untutored being overwhelmed with brilliancy and dash of color. Good taste is better than a fat purse in the selection of works of art.

DRYPOINTS

Classed as etchings, altho erroneously, are what are known as drypoints. These are really a type of engraving, as there is no etching involved in the process. The word "etching" signifies the eating out of the lines with acid. Drypoints are made by drawing directly on the metal plate, without acids. A sharpened steel needle or similar device, held in the hand in the manner of a pencil, is used to scratch the surface of the metal. A slight burr is thrown up on each side of the scratch or line, which holds ink during the printing and thereby impresses a richer line on the paper than does the etched line. However, if the artist removes this burr from the plate an extremely delicate line is the result. The two features of drypoint work give it a wide scope of utility. Percy Smith says of drypoint: "The glory of the drypoint line, with its natural burr, is the range and illusiveness of its power. It can be dramatic and yet at the same time sensitive. Often it has no edge. Its dramatic power clothes it with a force, possessed, it seems to me, by no other line: charcoal probably comes near-

est to it in intensity. It is replete with that quality which artists know as 'feeling.' Its indefiniteness endows it with mystery. The sensitive response to the gentlest conceivable touch of the tool on the copper, the veil of burr, gives it the rare quality of infinity."[1]

Drypoint is often used in an etching to add color and warmth to it, or where extreme delicacy is required the drypoint line, with the burr removed, is more efficacious than the etched line.

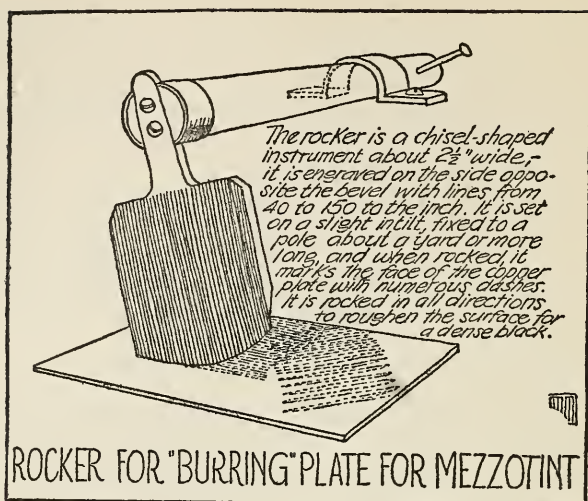
AQUATINTS

The aquatint is really a type of etching that can be said to have been painted with acid. The etching is a picture composed of lines. The aquatint is a composition of mass. Often the two are combined, as in some of Turner's famous "Liber Studiorum." The plate is "grounded" (coated) somewhat in the manner of the etching, after which it is sketched with a very soft pencil. It is then put in an acid bath, which eats away those portions of the surface which have been sketched. By re-coating the high lights with an acid-resisting composition, and again giving the plate the acid bath, varying degrees of light and shade are given to the finished print.

MEZZOTINT

The mezzotint is to the drypoint what the aquatint is to the etching. The drypoint is a

[1] "On Making and Collecting Etchings," edited by E. Hesketh Hubbard.



ROCKER FOR "BURRING" PLATE FOR MEZZOTINT

picture made with lines scratched—not etched—on a metal plate. A mezzotint is a picture made from a metal plate whose surface has been roughened and parts of it scraped or burnished. A metal plate is grounded with a rocking tool; that is, a sort of round-edged chisel, with small ridges in its cutting surface, is rocked back and forth over the surface of the plate until it is entirely roughened with little ridges, which when filled with ink will give a rich black print. The rocker, as it is called, is shown in the illustration. The ridges on the rocker run from about forty to one hundred and fifty to the inch. The picture is made on the plate by means of a tool called a burnisher, and another tool called

a scraper. The high lights are made by burnishing the surface of the plate bright; the intermediate tones by varying degrees of scraping away the roughened surface. The plate is printed in a manner similar to an etched plate.

Combinations of etching and mezzotint are often found. For a noteworthy example, we again refer to the Turner "Liber Studiorum."

SOFT GROUND ETCHING

Another type of etching sometimes found is the "soft ground etching." This is produced by using a rather soft coating or ground, over which is placed a piece of tissue paper. The drawing or sketch is made on this paper with a pencil or round-pointed needle. When the drawing is finished, the tissue paper is removed from the plate, each impressed line on the paper carrying with it the ground, and leaving exposed a line of metal plate. When immersed in acid, this line is eaten away. Etchings made in this manner have softer, wider lines.

LINE ENGRAVING

Altho superseded by etching, the collecting of line engravings is fairly popular. Due to the practical discontinuance of the art of line engraving, they are becoming rare, and collectors, recognizing this, are commencing to gather them in with avidity. For many years line en-

graving was the sole or principal means of reproducing the works of great masters. During the Victorian period it was quite customary to use this form of printing for illustrating books, and if you happen to have in your library books published about the middle of the nineteenth century, you will undoubtedly note the accuracy of this statement.

Line engraving has not the spontaneity of etching or drypoint, both of which are produced with comparatively light, easy scratching, whereas line engravings are made by rather labored use of a diamond-shaped, pointed engraving tool called "burin" or "graver." This is pushed through the metal, usually copper, altho sometimes steel, making a groove which holds the ink. Shading is done by varying the depth of the grooves, and by spacing and arranging them.

One of the reasons that line engraving has practically become a lost art is the length of time necessary to do great pieces of work. The most vivid example of this is illustrated in a note by Frederick Keppel in his book, "The Golden Age of Engraving," concerning the engraver Friedrich Müller, who was born at Stuttgart in 1783. Müller's masterpiece is his great engraving of Raphael's Sistine Madonna. This engraving gave him preeminence over all modern engravers. Speaking of his work on the Sistine Madonna, Keppel says, "Six years before his death, he was commissioned

by Rittner of Dresden to engrave that inspired picture, which is the pride of the Dresden Gallery. His very existence seemed wrapped up in the execution of this plate; he worked upon it day and night with the same self-consuming zeal that Mozart expended on the 'Requiem' which proved to be his own. When the plate was finished, he took it to Rittner, but the man of business refused it, on the ground that the lines were so delicately cut that it would not print a sufficient number of impressions. Every line had to be deepened, and this thankless toil broke the heart of poor Müller. He bore up till his task was finished, and then he sank into the gloom of hopeless insanity and died the very day that the first proof of his plate was printed. It was hung over his bier as he lay dead."

This type of labored work is not in vogue today, and in truth, it is unnecessary. Perfection of photographic processes and color printing permit the world to enjoy some of the beauties of the masters. More suitable to the tendencies of to-day is the graceful and imaginative etching.

Many people are familiar with line engravings under the name "steel engravings." This term is erroneously used in most cases, as engraving on copper plates was by far the most prevalent method. The steel plate was not a soft enough medium for the artist properly to express himself. Due to the softness of copper the number of impressions were necessarily limited. On the other hand, for commercial

work, such as engraved stamps and currency, the steel plate is used. As a beautiful example of utilitarian steel engraving, the United States one-dollar bills have no peer, excepting perhaps the thousand-dollar bill, which some people prefer.

An important subdivision of line engraving is "stipple engraving," which is produced by punching dots or holes into the plate. Bartolozzi was a master of this particular style of engraving.

WOODCUTS

All of the types of printing which we have discussed thus far are what is known as "intaglio," that is, to produce black, a groove was engraved or etched into a metal plate. We now come to a type of printing which differs from the intaglio process. In this case, wherever a groove is made in the wood, a white line is produced on the print. The wood*cut* is the oldest form of printing. The surface of a block of wood is smoothed, after which lines are cut into it with a knife. Wherever the lines are cut a white line will show, and the inked surface will print black. In wood *engraving,* cross-grained blocks of hard boxwood are used. Here a graver, similar to that used by the metal engravers, is pushed through the wood, cutting lines in the same manner as in metal engraving.

Block printing dates back considerably before

the thirteenth century, when it was practised in China, Korea and Japan. The earliest known date for European woodcuts is 1423. This early form of woodcut printing was in the form of block books. Block books consisted at first of printed pictures, made by means of the woodcut, but later texts as well as pictures were cut into the same block of wood. A page from a block book is shown on page 163.

There is a keen fascination about old woodcuts and fortunate indeed is the collector who possesses some of these prints. The earlier woodcuts are charming in their unadorned simplicity. Later, the woodcut and wood engraving became more complex, and lent themselves well indeed to detail printing.

The early method of taking woodcut impressions was to lay a sheet of paper on the inked surface of the block, and then to rub the back of the paper with a flat piece of wood or a scrubbing brush, bringing it in close contact with the inked ridges on the surface of the block. This proved to be an inefficient method of printing, as neither quality nor speed were satisfactory. The gradual evolution from this crude process culminated in the printing press.

LITHOGRAPHY

Another process of printing, which produces excellent prints and in which the collector finds delight, is lithography. This is known as a

"planographic" process, that is, the printing is done from a flat surface, in contradistinction to the ridges of the relief process and the engraving of the intaglio process. The lithograph is based entirely upon chemical and physical action. The drawing is made with a fatty crayon on a special variety of limestone, after which the stone is treated with acidulated water and with gum water. The stone is then moistened. Those parts of the stone which have been drawn upon with the fatty crayon reject the water. However, when the stone is inked, these same lines have an affinity for the printing ink, whereas, those portions of the stone not drawn upon reject the ink. Thus, it will be seen that lithography is based on the old principle that oil and water will not mix.

Lithography came into prominence in the latter part of the eighteenth century, but being quickly adopted for commercial purposes it was more or less discredited as an artistic medium.

About 1878, Daumier exhibited some of his lithographs at the Durand-Ruel Galleries in Paris. Prior to that time, Menzel, Delacroix, Decamps, Corot and Raffet had made use of this medium. Then Whistler took it up and produced by this method some of his finest works.

Elizabeth Luther Cary, in her book "The Works of James McNeill Whistler," says of lithographs: "The difficulty of the medium is just enough to add zest to the conquering, and its beauty is rewarding to an extreme degree. The

black or gray line or wash, showing, as it does, against the white ground, has peculiar charms for an artist in love with a thing seen, rather than with the method of reproduction, and the method is free from that rebellion of the material which makes etching a species of battle between the artist and his instrument."

Again quoting from the same book, we have an admirable description of Whistler's work on one of his lithographs, "In the wonderful lithotint 'Early Morning,' for example, the stone was called upon to reproduce that mystery of air and water which he had won with oils, with etching and with pastel. After repeated revision and labor the effect was gained, and a comparison of two of the states shows the pains spent upon it. The scene is the river at Battersea, with a group of buildings stretched along the horizon, a bridge in the distance, and in the foreground some barges, and two men leaning on a bar. In the first state, clouds in the sky are held with sharp edges, and both the sky and river are murky in tone. By scraping and re-etching, the cloud edges and heavy darks were removed until an exquisite suggestion of light stealing into the air was gained; and in the second state the soft mists of dawn hang over the horizon.

HISTORY

While it is possible to enjoy an art without knowing its history, it is indeed like traveling

in a country without a knowledge of the language. One should have a smattering, at least. Therefore, for him who would seriously take up the collecting of prints, it is advisable to delve somewhat into their history.

The invention of printing from engraved plates, like so many other things that had their origin centuries ago, has a story woven about it, which may or may not be true. Tommaso Finiguerra was a Florentine goldsmith. He decorated gold and silver plates by filling their engraved lines with black enamel, or "niello." Before treating the plates with the niello, which would ultimately harden and be permanent, it was customary to secure the effect with a temporary medium, and he would, therefore, rub soot and oil into the crevices. It so happened, —and unless it had this story would never have been told—that one of his plates was laid face downward upon a sheet of paper, and when the plate was removed, the first impression from an engraved plate appeared upon the surface of the paper.

Some historians give the story a little different twist and lay the incident to the carelessness of a maid who permitted some of Finiguerra's damp linen to come in contact with one of these plates. Perhaps none of these stories bear close scrutiny, but they are interesting nevertheless.

The earliest engravings recorded are a series of copperplate engravings of the "Passion," printed about the middle of the fifteenth cen-

tury. The first etchings are supposed to have been made about the same time. Etching at that time differed little from engraving, because no suitable acid had as yet been discovered to give the etching its individual character.

The latter part of the fifteenth century was a golden period for engraving. Albrecht Dürer, the leader of the German school, was born in 1471. The greatest all-around genius the world has ever known, Michael Angelo, was born in 1474, and then came Titian and Raphael. In 1577, Rubens first saw light, and in 1606, Rembrandt, the greatest of all etchers, was born. As engraving was the only method of reproducing the work of these masters, they encouraged it. Raphael employed Markantonio Raimondi to engrave reproductions of his work. Titian employed Cornelius Cort for a similar purpose, and Rubens also encouraged engraving, in order to give wider scope to his work. However, Rembrandt and Dürer did original engraving and etching, and have gone down to posterity as the greatest masters in this field.

ALBRECHT DÜRER

Dürer is known principally for his engravings, and although he could etch, he practised this art but seldom. P. G. Hammerton says of Dürer: "There is a quality in all Dürer's work which gives it inexhaustible interest; it always makes us feel that we have not yet got to the

bottom of it, that there are meanings in it deeper than any we have yet read, and that closer and more intelligent study will be rewarded by farther knowledge and fuller enjoyment. His intense seriousness, his powerful and somewhat morbid imagination, gave him a tendency to philosophical and poetical suggestion somewhat beyond the range of graphic art. It is easy to propose solutions of Dürer's enigmas, but what he really intended, in some of his most elaborate plates, will perhaps remain forever a mystery. Who knows what was in Dürer's mind when he engraved the 'Great Horse'? Certainly his purpose was not simply the designing of a muscular quadruped." [2]

REMBRANDT

Rembrandt is, with the possible exception of Michael Angelo, the most interesting of all the great masters. There is something fundamental in the art of Rembrandt, both in his etchings and his paintings, that appeals to the veriest amateur in the appreciation of art, as well as to the seasoned critic. Perhaps it is the sketchiness of his work, the elimination of all superfluity which often tends to distract the attention of the novice, that brings home with great force the message of the artist. The soul of no other artist has so truly been imprisoned on canvas or paper as that of Rembrandt.

[2] "Etching and Etchers," by P. G. Hammerton.

"INVERARY PIER," BY TURNER.
Mezzotint, 7 1/16" x 10 5/16".

"LAUTERBRÜNEN," BY D. S. MCLAUGHLIN.
Etching, 10¾" x 14⅛".

"The next notable fact about Rembrandt," P. G. Hammerton tells us, "is that he saw and etched with the most various degrees of abstraction, so that his sketching passes from the very slightest and rudest *croquis* to what is popularly accepted as finished work. All these degrees of abstraction he had constantly at command, and used them sometimes in the same plate, passing with subtle gradation from one to the other, as it suited him, and so leading us to dwell upon what he considered best worth our study.

"Another point which distinguishes Rembrandt from many inferior aquafortists, is his manly use, on due occasion, of the frank, etched line. He knew beauty and the value of it, and was so far from trying to dissimulate it in deference to popular taste, that he laid it boldly and bare wherever he saw the need of it, even in his most careful and elaborate performances. There is only one Englishman, Haden, who has used the line in this direct, effectual way, and Rembrandt taught him. Turner could use it also, but he looked always to mezzotint to help him out. Of modern Frenchmen, Lalanne, Appian, Chifflart, Jongkind and Daubigny employ the free line with various degrees of success, but no one has ever yet used it like Rembrandt; and in this respect even the greatest of old masters are feeble in comparison with him—all, except Van Dyck."

Portraits seldom lent themselves well to the etcher's art, but Rembrandt's work in etched por-

traiture proved the exception to this rule. He found himself to be a most excellent model, and made no less than thirty etchings of himself, some of which constitute the most charming examples of his work. His fame as an etcher, however, lies principally in his etchings of landscapes.

OSTADE, POTTER AND VAN DYCK

Ostade was the great painter and etcher of the Dutch school, who immortalized the peasant life of Holland. The mechanical delicacy and technical skill of Ostade was not reflected in his choice of subject matter, which was usually the gross and debased side of peasantry.

Paul Potter is famous for his paintings and etchings of animals. "The Bull" is his best known etching, as well as the subject for his most famous painting.

Of Van Dyck, P. G. Hammerton has the following to say: "He is one of the great princes of the art, a royal master who is to be spoken of only with the most profound respect. He had all the great qualities; he had perfect freedom and exquisite refinement; he used the needle with admirable ease and grace, and his masterly force was restrained and tempered with a cultivated severity. But it is inevitable that a genius of this kind, whose purposes were few, and who always kept steadily to the path where success ever attended him, should not offer matter for so much

commentary as the less admirable and less wise, but more various and audacious artists who have undertaken many different enterprises, and alternately surprised the world by unexpected triumphs and almost unaccountable failures."

The middle of the 19th century saw a revival of etching in France. The names of Claude, Callot, Boissieu, Meryon, Lalanne, Jacquemart, Jacque, Daubigny, Appian, Chifflart, Lalauze, Veyrassat, Martial, Corot, Bracquemond and Legros stand out prominently.

CHARLES MERYON

"As an etcher Meryon was remarkable for great certainty of hand, combined with extraordinary caution. When at work from nature he stood, and without support of any kind, held both plate and mirror in one hand, laying the lines with the other, and so steadily that the most skilful etchers marveled at his skill. No work ever done in the world has been more absolutely honest, more free from executive affectation or pride of method. He had great subtlety and delicacy of observation, and a perception of truth so clear that it is strange how such bright insight can have been compatible with any cloud or malady of the mind." Meryon became insane in his later life, but his malady was in no way apparent in his work. His most famous etching is "Le Stryge," an impressive picture of the horned and winged

demon who perpetually contemplates Paris from one of the towers of Notre Dame. We have yet to find a more perfect combination of the etcher's art of expressing complexed emotions in comparatively few graceful, pregnant lines and an author's ability to register in prose his interpretation of an etching, than the following paragraph from P. G. Hammerton's "Etching and Etchers"; speaking of "Le Stryge," he says: "He looks down the Seine towards the pavilions of the Tuileries, and his stony eyes have watched through the long centuries the changes on its banks. The face wears an expression of quiet and contented observation; from the Middle Ages, when this demon first looked from his lofty post, there has been sin enough in the great city to afford him uninterrupted satisfaction. He saw the massacre of St. Bartholomew, and felt warm gladness in his heart of stone whilst the chants of thanksgiving rose musically in the choir below; nor was he less inwardly gratified when the slow processions of carts took the nobles to the guillotine and the chanting priests were silenced. Those uncouth ears have heard the roar and tumult of revolution and the clamor of the near bells that shook the gray towers in the hour of triumph when the versatile priesthood praised God and the powers that be. Nor have public crimes or public miseries been the demon's only consolation. Night after night, he hears the low splash when the suicide leaps into

the water, and a steady, continuous murmur of long lamentation and blasphemy."

Of the English school of etchers, Turner, Wilkie, Geddes, Ruskin, Whistler, Haden, Cruikshank, Doyle, Samuel Palmer, Millais, Cope Horsley, Hook, Creswick, Redgrave, Ridley, Tayler, Ansdell, Knight, Chattock, George, Wyllie, Westwood, stand out more or less prominently. All of the above should be discussed at some length, but in an outline such as this, that would be impossible. We must, therefore, limit ourselves to a few words concerning the two who are generally conceded to rank with Rembrandt, the greatest master of etching.

WHISTLER

James McNeill Whistler, who is one of them, was an American by birth but lived the greater part of his life in England. Whistler, a contemporary of Haden, was in personality his antithesis. He was an egotist in the extreme, a man who had but few friends who could maintain that relationship with him for long. His sharp tongue and cruel wit made him socially impossible. He emphasized this by writing a book entitled "The Gentle Art of Making Enemies." Despite his personal failings, his art was such that it could not fail to receive universal recognition. His most famous painting, "Whistler's Mother," attested to his great art in painting, as well as to his redeeming social grace, his deep

affection for his mother. His early etchings were principally of scenes along the Thames. He was a master of the needle and interpreted his subjects with much economy of line. His "Venetian Set" is considered one of his finest works, among which are several of his famous "Nocturnes."

Whistler had many biographers, his Boswell being Joseph Pennell, the American etcher, and his wife, Elizabeth R. Pennell. Pennell wrote the following in a London magazine: "Whistler was the greatest etcher and the most accomplished lithographer who ever lived. All his work is alike perfect. It has only been produced under different circumstances, and is an attempt to render different effects or situations. Therefore, the methods vary, but the results are always the same—great; the greatest, the most perfect, as a whole, that any teacher ever accomplished."

HADEN

Sir Seymour Haden, a prominent and active London surgeon, was the foremost hobbyist that the world has ever known. He collected etchings as a hobby, and also did some etching himself. It was not, however, until on the verge of a breakdown from overwork, that the opportunity afforded itself for him to lift his etching to the grand heights of artistic success. Forced to abandon his profession for a time, in search of health, he devoted his genius to etching. His

work was solely for his own amusement and pleasure and only after repeated requests from his friends did he permit his etchings to be published. They took the world of art by storm, and Haden found himself in the enviable position of being one of the most eminent surgeons of London and at the same time an etcher ranked as a worthy successor to the great Rembrandt, whose style he had studied and followed.

Interpretation of nature was the field of art that he chose, and in this he has had no peers in modern times. He did not attempt to make the etching needle take the place of the camera but kept his work well within the natural sphere of true etching, seeking to interpret the spirit of nature, rather than the physical superficialities. His ability to etch trees was one of his greatest gifts.

There are many other etchers of note who are popular with collectors and who deserve considerable comment which unfortunately space forbids. Among these are: Zorn, Cameron, Brangwyn, McBey, Bone, Short, Pennell, and Parrish.

WHERE TO SECURE PRINTS

The collector of prints has several sources from which to secure his supply. In the larger cities perhaps the most available place is the print seller, or art shop, where the collector may inspect a great variety of prints and make pur-

chases according to the dictates of his fancy—and pocketbook. It is well to make a friend of a reliable print seller, particularly in the case of the beginner, as much practical information and guidance can be had from the conscientious dealer.

One of the amenities of hobbies is the friendship that springs up among those interested in the same things. In print collecting this friendliness can be used to advantage in procuring desirable prints. By means of newspaper advertising and clubs, as well as introduction by mutual friends, arrangements can be made for the exchange or purchase and sale of prints. Often a collector, in some manner or other, comes into possession of a print of merit, which does not particularly fit into his collection. Frequently this can be exchanged with a fellow collector, to mutual advantage.

To the collector of contemporary prints, purchasing from the artist himself adds charm and color to the acquisition.

The auction room is an excellent place for procuring additions to one's collection. It is a veritable school for the collector; indeed, it might be called "A School of Hard Knocks," for the beginner is quite likely to be overwhelmed by the atmosphere surrounding the auction block, and at times makes purchases which he will afterward regret. However, a few errors so made will soon put the collector on his guard.

HOW TO COLLECT

The beginner should permit his personal preference to guide him to a considerable extent in making purchases. Whereas there are certain general precautions to be taken, the collector must always bear in mind that he is principally interested in pleasing himself. Just because a print is rare and high-priced is no reason for making a purchase, nor should a print be secured merely because it is a bargain. It is not likely that one without taste or a reasonable amount of artistic perception will take up the hobby of print collecting. Therefore it is natural to assume that he is capable of judging what most pleases him.

Unless the collector has considerable means, he should not attempt to acquire prints that happen to be the fashion of the day, for fashions come and fashions go, and the faddy collector is often left high and dry with a large collection of prints that have depreciated materially in value, and which no longer please him.

It is unwise to purchase prints in poor condition, or poor impressions, unless they are extremely rare prints that are greatly desired by the collector, and which he cannot afford to buy otherwise. Stains, dirt, mold marks and scratches on the printed surface lower the value of a print to a considerable degree. Extremely rare prints, particularly of the old masters, are frequently forged and even careful examination

of the paper and watermark fails to expose them to the uninitiated. Therefore, it is wise to refrain from buying such prints unless carefully guided by a reliable expert.

When collecting etchings of a particular artist it is interesting to collect all of the "states" of one plate. This is not only of great interest to the collector, but it enhances the value of the collection.

The collector of prints should accustom himself to consulting catalogues of the artists in whom he is interested. These catalogues are similar to bibliographies, such as are compiled concerning the works of prominent authors.

When we speak of catalogues, we do not mean those compiled for the sale of prints or books, altho we will now quote from such a catalogue, offering for sale a famous Catalogue of Whistler:

"455. Whistler (James Abbot McNeill) The etched work of Whistler, compiled, arranged and described by Edward G. Kennedy. With an introduction by Royal Cortissoz. Illustrated by reproductions in collotype of the different states of the plates (royal 4to, half Morocco) comprising over 1,000 reproductions. Together 7 vols., New York, Grolier Club, 1910, $850.

"Edition limited to 402 copies printed on old Stratford paper, at the De Vinne Press.

"An indispensable book for the Whistler collector. With the supplementary plate 'Nocturne Furnace' No. 213, and the supplemental plates which complete the work to date.

"The most exhaustive publication that has appeared on the etched work of Whistler. There are 446 etchings, chronologically described, many with the assistance of Whistler, or from memoranda left by him; prints have been measured, and the variation in size marked. A complete list of the plates known to have been destroyed or canceled is included, with an additional list of 82 plates which from their rarity may be assumed to have passed out of existence. Many of the canceled plates are reproduced, together with over 1000 reproductions of the various plates.

"The author, in his notes, gives a very interesting account of his interview with Whistler, concerning the proposed catalogue, which resulted in securing his hearty consent and cooperation. This monumental work very seldom appears for sale."

We have quoted the above to show the completeness of some of these catalogues of an artist's work. They are almost a necessity in determining the various states and conditions of prints. Not all are priced as high as $850. Many are within the reach of the average collector. However, the Whistler Catalogue by Kennedy is to be found in the Print Room of the New York Public Library.

In connection with the above catalogue it is interesting to note one of the many idiosyncrasies of Whistler. He was known as the "Prince of Egotists." When Mr. Kennedy approached Whistler to secure his cooperation and permission to compile this catalogue, he was firmly rebuffed, and the artist absolutely re-

fused to grant permission for its compilation. Whistler did not want his work vulgarized and commercialized. However, when Mr. Kennedy carefully explained that the edition was to be limited, and only for members of the Grolier Club in New York, and craftily discussed with Whistler the catalogue that had been compiled of Rembrandt's etchings, Whistler gradually weakened. Finally, Whistler decided that the work was going to be "very swell" and gave his hearty endorsement and cooperation.

Another amusing story about Whistler is told by Frederick Keppel:[3] "During his (Whistler's) last visit to Paris, he was making a call on a lady of exalted rank, and she said to him, 'You are well acquainted with King Edward of England.' 'Well, no,' said Whistler, 'not personally.' 'Why,' said the lady, 'His Majesty was speaking to me in London recently, and said he knew you well.' 'Oh,' said Whistler, 'that was only his brag.' "

Prints are enjoyed to a greater extent if framed and hung on the walls of the home, but it is usually impossible effectively to frame and hang all the prints in a large collection, in which case they should be suitably mounted and kept in portfolios or boxes.

The proper way to mount prints is to attach them to a piece of cardboard by means of two small gummed hinges at the top. A suitable mat should be placed over the print, allowing the

[3] "The Golden Age of Engraving," by Frederick Keppel.

printed surface with the plate mark and signature to show through.

Etchings that are framed are most effective when surrounded by a reasonably wide, white or cream-colored mat, and enclosed in a narrow frame of black, gold, or natural wood.

Under no circumstances should a print ever be pasted or glued to a mount. Not only is it liable to injure the print through discoloration, but it immediately reduces its value.

The collector of prints is urged to read much on the subject of his hobby, to visit exhibitions whenever possible, to examine prints whenever he can lay his hands on them, and above all, to mingle freely with fellow collectors. Close contact with those who are collecting prints will widen the horizon of the beginner, and add to the natural enjoyment of his hobby the even greater felicity of good fellowship and camaraderie.

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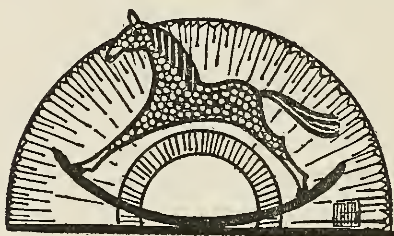


RADIO

JOHN SMITH worked hard all day, that is, if the average business man can be said to do any real hard work. He arrived at his office at 9:30, glanced at his mail, and at 9:45 went into a "conference." The conference consisted of smoking three cigars, ten cigarettes, announcing the discovery of a new bootlegger, raising one of the stenographer's wages a dollar a week, explaining how his car ran twenty-two miles on a gallon of gasoline, reading a report of the sales manager, and then adjourning for lunch. Lunch was over at 2 o'clock, and after three-quarters of an hour at the barber shop John Smith was again hard at work in his office. Two more conferences finished off the afternoon, after which he ran for the 5:26 train to the suburbs. As might be expected, he arrived

home in a rather worn-out condition. After some petting from his wife and a sample of his new bootlegger's best, he found sufficient strength to eat his dinner.

Now it is patent that John Smith needed some relaxation after his arduous day. Perhaps his day was not really as hard as he pretended to his wife, but it really was more difficult than the reader may think, for the average day at business, such as this, lacks mental stimulus to keep a man going full speed ahead. The same sort of thing, day in day out, does begin to wear.

After dinner and a cheerful chat with his wife, John Smith walked into his cozy little den, closed the door, and sat down at his desk. Had you been in the room at that moment, you would have noticed a remarkable change in his expression. The drawn, listless look was gone, and in its place was an animated expression of expectancy. On the desk in front of him was his radio apparatus, not just the usual broadcast receiver, although his instruments were capable of receiving broadcasting from far and near, but a complete transmitter and receiver. Clapping the telephone receivers on his ears, he listened in for a short time. Hearing the dot-and-dash Morse code call of a friend of his, he ticked off on his key a greeting which was returned. Then John Smith listened some more.

Suddenly, an idea came to John! He would attempt something that he had never accom-

plished before! He was no longer the "average American business man," the commuter, the bootleg conversationalist; he was in another world and he was another man. He could do things that most people only read about, and at that, only read about with wonder. Three thousand miles to the north of him, in latitude 79° north, longitude 79° west, was a small ship, frozen fast in the ice. In a cramped little cabin on board the ship was a young man known everywhere in the United States to the radio fraternity. The man was Donald Mix and the ship was the MacMillan Arctic schooner, *Bowdoin*.

John Smith knew that at this time, according to schedule, the amateur radio operator on board the ship within a few hundred miles of the North Pole, would be trying to communicate with civilization, and though Smith had never before succeeded in talking to the ship, he decided to make another attempt. "Click! Click! Click!" went his key, as he spelled out the call letters of the *Bowdoin,* W-N-P, and then his own call letters. He listened intently, but heard nothing except the crackling of static. Five minutes later, he again called W-N-P, and then listened; this time, he heard something but could not quite make it out. Carefully adjusting his receiver he listened eagerly. A thrill went up and down his spine, as he heard some one sending his, John Smith's, call letters. It seemed an hour, although only a few seconds

elapsed, before the sender signed his own call, which consisted of the three letters he had been waiting for so long, W-N-P! Here he was, who had been some moments before but ordinary John Smith, now an important link in one of the greatest polar expeditions ever attempted. Again he called W-N-P, signing his own call and then the international signal QRU, meaning "Have you anything for me?" Yes, the *Bowdoin* did have a message for him, which he copied with much excitement. It was not just an ordinary message, but one addressed to the President of the United States. It was signed by MacMillan, and it thanked the President for the Christmas greetings which had been transmitted by another amateur station a short time before.

Then followed a little personal conversation with Donald Mix. "It is 40° below zero," telegraphed Mix, "and snowing hard. We're warm and cozy though, and have been enjoying some radio concerts this evening from Chicago. A few moments ago we were all dancing to music being played in the Drake Hotel." After a few minutes more of radio talk, with the cheerful "CUL-OM-GN," ("See you later, old man; good night"), Donald Mix signed off.

Yes, to-morrow John Smith will be having his "conferences," but to-night he walks with the spirits of Captain Scott and Admiral Peary. Can there be a more fascinating hobby than that which enables a man to explore the world, as it

were, in the seclusion and comfort of his own library? And this was not a mere accident; such communication with the *Bowdoin* is being accomplished at the present time by many; not sufficient to make it commonplace, but enough to make it quite possible to happen to you.

Amateurs in Alaska, British Columbia, North Dakota, Ontario, Illinois, California, Washington, Iowa, New Hampshire, Minnesota and Pennsylvania, were in touch with the *Bowdoin* during the months of September and October, 1923. It makes little difference who you are, or where you are; with a small expenditure of money and average intelligence, you can do what these men have done. Yes, radio is a great hobby!

RADIO, THE HOBBY

We must make it clear from the beginning that we do not mean by "Radio as a Hobby" what so many hundreds of thousands, nay, millions of radio enthusiasts are doing to-day. Pressing a button, turning a dial and listening to a jazz band may be fun, but it is far from being a hobby. Radio as a toy and as a most interesting and useful means of disseminating news is a boon to mankind, but it is not a hobby. Any one who has a radio set has the opportunity, however, if it so please him, to make of this new science a most interesting and perhaps useful hobby. Radio, the hobby, comes under the categories, as

outlined in first chapter, of acquiring knowledge and the creating of things.

LONG DISTANCE RADIO

There are three ways of following the radio fancy. The first and most usual is to study the general principles of radio and apply them to experimental work in varying circuits of broadcast receiving sets, inventing new ones, making changes in the mechanical design of radio sets, and so forth. The immediate reward of this work is usually the reception of radio programs over great distances. There is a fascination in this which does not seem to be waning, although we predict that the radio hobbyist must soon have something more substantial than this as his goal. After all, when it becomes just as easy to hear a station one thousand miles away as it is to hear a local station, there will be no difference in thrill, whether the jazz band playing "Honeybunch Blues" is in New York or Chicago. There is, however, a more lasting and deeper significance to radio than this.

AMATEUR RADIO

The second field for the radio hobbyist is to learn the code, build or buy a transmitter, and become a genuine radio amateur. The radio amateur ranges in age from eight to eighty, and in ability, from the rankest putterer to the high-

est type of radio engineer. There are at the present time over fifty thousand radio amateurs in the United States who are really accomplishing things in the science of communication while pursuing their hobby. Encouraged and protected by the Government, they are making rapid strides. Much of the progress made in low-wave, low-power communication can be attributed to the amateurs. They have banded together into a national organization called the American Radio Relay League. This institution endeavors to improve the art of communication by low-power, inexpensive radio transmitters and receivers. They have woven a network of relay stations all over the United States, and having succeeded in establishing efficient routes of communication from coast to coast, and from Gulf to Lakes, they have entered into the more ambitious stage of international communication, having succeeded in two-way communication with France, England and Japan from the United States.

The MacMillan Expedition to the North Pole is being kept in constant communication with civilization by amateur radio, as already mentioned. The radio operator on board the *Bowdoin,* Donald Mix, was taken from the ranks of the amateurs. This radio venture is being carried on under the auspices of the American Radio Relay League. The entire ranks of the League are kept informed on all matters pertaining to their welfare by the official organ

"QST." These initials, by the way, are the international radio signals meaning, "All stations attention."

There is a sense of satisfaction and power in having an efficient radio station, in being able to communicate at will with your co-enthusiasts, although separated hundreds of miles. This no doubt has much to do with the ever-increasing popularity of radio.

WORLDWIDE RADIO

The third field for the radio fancier is listening in to code stations. This is not as general as the two preceding fields of activity, but is by no means the least interesting. There is no more fascinating way of observing life than to have a radio set capable of receiving all kinds of messages from at least half of the world. Such a radio set is within the average means, and can be built from parts easily purchased. In fact, it costs little more, if any, to build a radio set capable of receiving radio telegraph messages from Europe, South America and Asia, than it does for receiving nearby radio home entertainment.

Guy Wetmore Caryll has written a poem about Fortunatus and his magical cap. The cap was little more miraculous than the modern radio receiver:

* * * * *

I barely believe that the story is true,
But here's what the cap was reported to do:

Suppose you were sitting at home,
And you wished to see (hear) Paris or Rome,
You'd pick up that bonnet,
You'd carefully don it,
The name of the city you'd call,
And the very next minute,
By Jove, you were in it,
Without having started at all!
One moment you sauntered on upper Broadway,
And the next on the Corso or Rue de la Paix!

Why, it beat every journey of Cook's,
Knocked spots out of Baedeker's books!
He stepped from his doorway
Direct into Norway,
He hopped in a trice to Ceylon,
He saw Madagascar,
Went round by Alaska,
And called on a girl in Luzon:
If they said she'd be down in a moment or two,
He took, while he waited, a peek at Peru!

He could wake up at eight in Siam,
Take his tub, if he wanted, in Guam,
Eat breakfast in Kansas,
And lunch in Matanzas,
Go out for a walk in Brazil,
Take tea in Madeira,
Dine on the Riviera,
And smoke a cigar in Seville,
Go out to the theater in Vladivostok,
And retire in New York at eleven o'clock!

Even Conrad's tales of the sea lack the thrill of actually receiving an SOS message from a

sinking ship and hearing first hand all the distressing details. We were fortunate enough to listen to the entire exchange of messages between runaway airship *Shenandoah* and her base station at Lakehurst, and must admit that it was as thrilling an evening as we had spent in many a month. When such things are read in the newspapers, they are interesting, but when heard first hand they give one the feeling of being a participant.

We have copied interesting messages in a single evening at our home in New York, from San Francisco, Honolulu, Paris, Berlin, London, Panama and Buenos Aires, as well as from ships on the Atlantic and Pacific Oceans. Are these messages always interesting? They seldom are, in themselves, but the atmosphere that they create is well worth the time spent in tuning for them. A man is not vitally interested in the fact that a girl in Berlin is telegraphing a message of affection to her sweetheart in Madrid, or that Don Carlos & Co. in Buenos Aires are rejecting a shipment of cotton goods from a firm in New York, or that Mrs. Jones is glad to tell Mr. Jones that she has recovered from her attack of seasickness and expects the *Leviathan* to land next Wednesday noon; but he is interested in people and what they do and what they think, and thus he receives much pleasure from listening to what his fellow men all over the world are doing and thinking, particularly when this can

be accomplished in the pleasant surroundings of his own home.

Of course, these personal messages are not all that can be heard. Press messages sent out by the various newspaper organizations and correspondents can be copied and read long before they appear in the newspapers. If, by any chance, a man does not live in a town whose newspapers subscribe to all the foreign news, the radio telegraph may prove to be his only means of learning promptly what is going on in the world. But whether it appears in the newspapers or not, there is undeniably great satisfaction in getting the news firsthand.

SENDING TO NEW ZEALAND

Amateur radio has taken on such an international aspect that the official magazine of the American Radio Relay League has found it necessary to open a special department for international radio news. To-day the radio hobbyists all over the world are becoming closely associated, and it may be that it will be through this close association of men of all nationalities with a single interest at heart, that world peace will become a fact.

In a recent issue of "QST", Mr. F. D. Bell of Palmerstown South, New Zealand, tells us what is being done in radio in the Antipodes. Because of the remoteness of New Zealand, and

what radio is doing for some of her inhabitants, we will quote some of the article.

"Here we have a country about the same size as Britain, with a population of over a million, not counting a few Maoris, who are as white as the rest of us in everything except complexion. If the snout of New Zealand were tied to the doorknob of the 'QST' factory,[1] its tail would be getting very damp in the Gulf of Mexico. But we are not quite so uncivilized as some of you think; very few of us use our wigwams now! In the cities are to be found ice cream sodas, trams (trolley cars), bad whiskey, central heating, and lots of other things dear to the American heart.

"Ship operators tell us that conditions for reception out here are better than anywhere else in the world; such stations as L-Y at Bordeaux, P-O-Z at Nauen, U-F-T at Sainte Assise (near Paris), I-D-O at Rome, and the big American stations, are easily readable on one valve."

Valve is the English equivalent for the American vacuum tube. A one-tube set, capable of receiving such distances as Mr. Bell relates, can be built to-day for less than $20.00, and is described in this chapter.

He goes on to say that in his home in New Zealand he is able to copy Bucharest, Berlin, London, and many other European stations. He also copies low-power stations in the Hawaiian Islands, Japan and San Francisco. He mentions that one operator in New Zealand, on

[1] Hartford, Conn.

a single-tube set, has heard low-power spark stations in the United States, Canada, Japan, South Africa and Egypt.

Mr. Bell says, "Besides logging many of you Yank amateurs on C. W. (continuous wave), I have heard the voice of Mr. Leonard, 9KP, and also music from the New York broadcast station W-H-A-Z (Rensselaer Polytechnic School, Troy, N. Y.).

"As regards you amateurs—well, your signals seem to keep getting louder and louder, although I do not think any one has been quite as noisy as 6KA and 6JD (California amateurs) during the recent tests. It is a treat to hear the QRN (interference) among the Yanks some nights. Our hats are off to you fellows, and it is our ambition to push our signals over to you some day, although it will be a much harder job for us than for you, owing to inferior conditions for reception in the U. S. A. We hope, however, soon to be QSO Honolulu [to be in communication with Honolulu], which would pave the way for a real, round-the-world amateur relay!

"Those of us with phone sets use them to work throughout New Zealand, and we have no difficulty in working the Australian amateurs on key, under average conditions, and on really good nights we can work two-way voice tests. The distances vary from 1,200 to 1,600 miles. My speech has been picked up in New South Wales, Victoria and Tasmania, and the C. W. (continuous wave telegraph) has been copied in

Samoa, 2,000 miles away, with about 1.7 amperes in the aerial. This is half way to Honolulu, so we're getting on!"

Mr. Bell states that on Monday, September 10th, 1923, which was Sunday, September 9th in the U. S., he heard twenty-seven different amateur radio stations in the U. S., and that stations on the Atlantic Coast came in as loud if not louder than those on the Pacific Coast.

It is an interesting thing to send a radio message in the U. S. and know that instantaneously some fellow radio hobbyist is reading it in Australia or New Zealand.

Mr. Bell tells us how we can be heard in Australia: "Now, here is a tip for those hams who have not yet landed a QSL card [Your signals have been heard] from Australia—when you are working late on a Saturday night, send your call signs slowly and clearly. The reason for this is that Saturday night with you means Sunday with us, which is our favorite evening for indulging in a little quiet Yank logging, and you must remember that some of us are no great shakes at receiving fast code, especially if it is badly spaced, as it often is. Then, there are others of you who are good operators, but who use two-way keys or some similar abomination and who send their dots like a brace of machine-gun fire. This style of sending is O. K. close at hand, but N. G. at a distance—1BRO, please note!"

Just to think that at the other end of the world

there is a man who is making notes of our idiosyncrasies!

RADIO ORGANIZATIONS

There are two outstanding organizations for those seriously interested in radio. One, the Institute of Radio Engineers, with headquarters in New York and branches in several other cities, is devoted principally to the ultra-scientific side of radio. The other organization is the Radio Club of America. This club is located in New York and has actively associated with it the foremost amateurs and professionals of the radio fraternity. The club has monthly meetings and treats radio subjects from a more popular point of view than does the Institute. Both publish proceedings, which are of interest to all who study radio. There are many smaller clubs located all over the country. Most of these welcome new radio "fans." The American Radio Relay League, Hartford, Conn., is glad to furnish, upon request, the names of the radio clubs in any particular locality. The man who adopts radio as a hobby is recommended to join some radio club.

NATURE OF ELECTRICITY

The adventurer into the mysteries of radio needs first to have an elementary knowledge of electricity. It must not be thought, because a

thorough understanding of the science of electricity has not been mastered and digested at school, or in a university, that the would-be radio hobbyist is forever barred from the sanctum of the elusive ether wave. Radio, like every other hobby, can be entered upon by easy stages. Progress may be slow at first, but eventually the pace quickens until it becomes an enthusiastic march into an everlastingly changing land of new delights.

The nature of electricity has not been so very long established, but it is now an accepted theory that every atom, of which all matter is made up, is charged with extremely small particles of negative electricity called electrons. Every normal atom has a sufficiency of electrons, in which case it has none of the ordinary electrical characteristics. If, however, there is a deficiency of electrons in an atom, it is said to be positively charged with electricity. If there is an excess of electrons, then the atom is negatively charged with electricity. The basis of all electrical phenomena is the effort of the atoms, which make up matter, to return to a state of equilibrium. This they do by withdrawing from the excessively supplied atoms the necessary quantity of electrons for the under-supplied atoms. Such a process causes a flow of electric current, so called.

Leaving behind us this theory, and looking at electrical phenomena from a more familiar point of view, we may say that there are two

kinds of electricity, one of which we use to run our trolley cars, to ring our doorbells and start our motor cars, namely, dynamic electricity (electricity in motion). The other kind we observe when we comb our hair on cold days, when we shuffle across a carpeted floor in a dry warm room in winter, namely, static electricity (electricity at rest).

STATIC ELECTRICITY

The crackling sound that we hear when we comb our hair on a cold morning, the spark that jumps from our finger to the chandelier after we have shuffled across the carpet, is the audible and visible sign that the atoms in the adjacent bodies have respectively a superfluity and an insufficiency of electrons and they are remedying these conditions by transferring sufficient electrons from the body with too many, to the body with too few. Over-ambitious these electrons are, for the conditions are soon reversed and the body that had an insufficiency has a superfluity, and the other body has too few electrons. This condition reverses itself many times in a second, until the two bodies have attained their normal quota of electrons, when all is again serene and quiet.

DYNAMIC ELECTRICITY

When electricity "flows" through a body or "conductor," we are then dealing with dynamic

electricity. Electricity is said to flow, which gives us a mental picture of a river, a fair analogy for the flow of an electric current. In order that a river may flow and produce current, it is necessary for the source to be higher than the mouth, so that pressure may be exerted and the water set in motion.

In an electric battery, which is a chemical device for releasing free atoms, under-supplied and over-supplied with electrons, there are two elements which correspond to the source and mouth of a river. One element with an undersupply of electrons called the positive (+) pole, corresponds to the source of the river; the other element, with an over-supply of electrons, called the negative (—) pole, corresponds to the mouth of the river. When a wire is connected between the two terminals we get a flow of electrons from the negative to the positive through the wire. This is caused by the difference of electrical pressure or potential, due, of course, to the unsatisfied atoms trying to become stabilized.

It has been customary in the past to refer to an electric current "flowing from positive to negative," but in view of the new and accepted electron theory, the reverse has been proven the case. The older texts, however, still speak of electric current "flowing from positive to negative."

The difference in electrical pressure, as just described, is measured by a unit called a "volt."

"THE REVELATION TO JOACHIM," BY DÜRER.
Woodcut, 8⅛" x 11½".

"TAUROMACHIE," BY GOYA.
Aquatint, 310 mm. x 207 mm.

The amount of electric current that flows is measured by a unit called an "ampere."

ELECTRIC RESISTANCE

Returning to the analogy of the river: If there is a sharp drop, there is considerable water pressure and a large volume of water will flow, providing however, that the banks of the river are wide apart; otherwise, if the river is cramped between two narrow banks, notwithstanding the high pressure, the resistance of the narrow passage will check the volume of the flow. In a like manner, the volume of electric current in a given circuit is dependent upon the pressure and the resistance of the circuit. (When the positive pole is connected to the negative pole by a conductor of electricity, a circuit is said to have been formed.) This resistance is measured by a unit called "ohm."

These three factors are dependent upon one another, and the following formula indicates their relationship, viz., current in amperes equals the potential in volts, divided by the resistance in ohms. This formula is known as Ohm's Law. It can readily be seen by this formula that we can control the amount of current that flows through a circuit by varying the resistance of the circuit.

Conductors of electricity have more or less resistance to electrical currents. A copper wire has the least resistance and is consequently used most frequently as a conductor. German silver

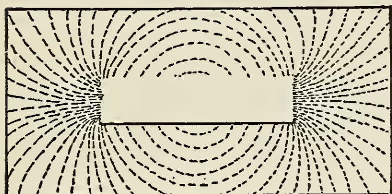
wire has a high resistance and is frequently used in a circuit to regulate the flow of current. It is necessary to vary the current flowing in many of the circuits used in radio and a coil of German silver wire, the length of which can be varied, is often used to accomplish this. Such an instrument is called a "rheostat." The thickness of a wire also determines its resistance and for small currents very thin wire of high resistance is sometimes used as a rheostat. Resistance, which is really electrical friction, produces heat just as mechanical friction does. In addition to German silver wire, graphite, carbon, water, mercury and platinum are sometimes used for their resistance.

WHAT'S A WATT?

If we wished to measure the power developed by a river, we would naturally have to figure on both the drop of the river, and the amount of water that flowed, for it is patent that a stream with a sudden drop, say five hundred feet, carrying but a slender trickle of water, would develop but little power, and likewise a deep wide river with such a small drop as barely to move the water, would also develop but little power. It is so with electricity, that the power is dependent both upon the potential and the flow of current. A formula for power of direct current circuits has been worked out. The power expressed in "watts" is equal to the product of the voltage and the amperage; 746 watts is equal to 1 H. P.

MAGNETISM

Every boy is familiar with the phenomenon of magnetism, the ability of magnetized iron or steel to attract a similar metal. The earth is in itself a huge magnet, having a north and south pole, and generally obeying the laws of magnetism. The magnetic compass needle is attracted by these poles. If two magnetized needles are placed in proximity it will be noted that the like poles repel each other and unlike poles at-



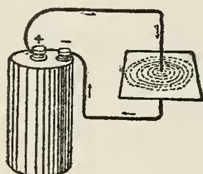
If a piece of paper is placed over a bar magnet, and a quantity of iron filings sprinkled over the surface of the paper, the filings will arrange themselves as shown.

tract; that is, two north poles or two south poles repel, and a north and south pole attract each other.

If a piece of paper is placed over a bar magnet, and a quantity of iron filings sprinkled over the surface of the paper, the filings will arrange themselves according to the illustration, indicating the nature of the lines of force which constitute the magnetic field. The invisible force which passes out of the north pole, around in a complete circuit to the south pole, is called "lines of force."

If a current of electricity is passed through

a wire, a magnetic field is formed around that wire. A simple experiment illustrating this can be made by passing a bare copper wire through a piece of white paper and connecting the two ends of the wire to the terminals of a dry battery. By sprinkling the iron filings on the paper, they will take a position of concentric circles around the wire, as is shown in the illustration. In order to strengthen this magnetic force, wire is usually coiled around an iron core. Such an apparatus is called an electro-magnet. If a coil of wire is rotated in a magnetic field, between



If an electric current is passed through a wire, a magnetic field is formed around the wire. By sprinkling iron filings on the paper, they will form themselves in concentric circles about the wire.

the north and south poles of two magnets, a current is generated in the coil of wire.

This idea, carried out on a large scale, gives us a generator or dynamo. Generators are so constructed as to give either a continuous flow of current in one direction, which is "direct current" (D. C.), or to alternate the direction of the flow of current many times a second. The latter is called "alternating current" (A. C.).

THEORY OF RADIO

If it is considered that scientists, in order to understand the nature of light waves and their

longer brothers, electro-magnetic waves, had to build for themselves a theory based on a purely hypothetical medium called "ether," we can realize that for the layman to comprehend these phenomena it is necessary also to explain them by either analogies or some hypothetical creations. Modern science has already discarded ether, the hypothetical medium through which light and electro-magnetic waves (radio) were supposed to travel. The newer theory is less easy to comprehend. For our purpose, however, we shall explain the older theory of radio with analogies to easily understood occurrences.

When a man with a thoughtful turn of mind wishes to contemplate something obscure, he usually seeks seclusion and solitude. We know of no better place for contemplation than the deck of a great liner in mid-ocean, on a quiet, starry night. Usually after midnight the boat deck is free of passengers. Nothing but the throb of the engines and the swish of the water breaks into the train of our thoughts, and these sounds, too, soon lull us into even deeper contemplation. And so we find ourselves propped up against a ventilator complacently gazing out on the dark sea. The ship is rolling gently, and as the starboard rail dips seaward, we catch a glimpse of phosphorescent foam. Above us are the stars, against which the masthead sways from side to side.

Directly above us are the wires of the radio antenna, and as we gaze at these fine threads we

wonder how, without any visible contact, they gather in the news of the world. Every morning, since we sailed, the newspaper containing current events of importance has been published on board. All these thoughts have come aboard ship through the slender wires at which we are looking. How wonderful it all seems! What is the invisible connection with the land? Farther down the deck we see the bright lights of the radio cabin, and through the window we catch a glimpse of the operator with the telephone receivers on his head. Suddenly the ship lurches violently to one side, as a particularly large swell strikes us, and we see the wave rolling rapidly away from the starboard side of the ship. What happens to the swell, after it disappears into the darkness, we contemplate? On it goes, we know, but whither? Where does it stop?

And this brings to us a thought: last summer, when we were at the seashore, we noticed that even several days after a severe storm at sea, notwithstanding absolute calm then prevailing, great rollers broke on the beach. Perhaps the wave that just passed out of our vision was bound for the beach a thousand miles away. Again we look at the wires swaying between the stars, and we remember what we have heard about wireless waves and that they are analogous to the waves in the ocean, and in our mind's eye, invisible though they are, we can see flocks of waves emanating from these wires, rolling off

in all directions to the shores that bound the sea.

For a moment we are satisfied with this explanation. We now understand how it is possible to make invisible contact with distant places. An electrical disturbance purposely created in an unseen medium which is everywhere, called "ether," rolls on and on like the waves of the sea.

But then the question occurs to us: There are hundreds of ships on the sea, there are hundreds of radio stations on land and if all of these are sending and receiving, what is there to prevent confusion? We recall having heard of radio waves of different lengths, and how waves of a given length are received only by instruments designed or tuned for them. Perplexed, we consider this for a moment and then recall that only yesterday, when it was rather choppy, we had remarked on the steadiness of the great ship on which we were sailing, and how, about a mile away, we had seen a small schooner violently tossing about. It did not seem strange to us then that this small schooner responded to the short, choppy waves, while our big ship sailed on undisturbed. Yes, now that we think of it, we have heard something to the effect that radio waves of comparatively short lengths disturb only those receiving sets which are constructed or tuned to be affected thereby, and that these short waves pass by radio sets tuned to receive only the longer ones.

And now another thought intrudes: What

happens to these waves when they come in contact with a mountain, a forest or a house? Do they stop? Why, of course not; we have momentarily forgotten that ether, this hypothetical, invisible medium through which radio waves travel, is everywhere and in everything, and so it must take other than a mere mountain, forest or house to stop the vibrations or waves in the ether.

WAVE LENGTHS

Science has computed the speed of electrical waves at 186,000 miles per second, or 300,000,000 meters per second. Assuming that we have a wave 300,000,000 meters long, it would pass between two points 300,000,000 meters apart in one second. If the waves were 150,000,000 meters long, in one second two waves would pass between two points 300,000,000 meters apart. If the waves were 75,000,000 meters long, four waves would pass between two points 300,000,000 meters apart in one second. The number of complete waves or cycles that pass between two points 300,000,000 meters apart is called "frequency," and is measured in cycles per second. In the last case mentioned, the frequency would be four cycles.

A careful consideration of the above will show that the wave length is equivalent to the velocity of the electric wave (300,000,000 meters per second), divided by the frequency, or the number of waves or oscillations that pass be-

tween two points 300,000,000 meters apart in one second. Therefore, if we wish to create in the ether, electrical waves (radio waves), say 200 meters long, we must disturb the ether with electrical oscillations having a frequency of 1,500,000 cycles per second or 1,500 kilocycles.

PRODUCING RADIO WAVES

Let us consider an analogy for the production of these oscillations, after which we will briefly discuss some of the apparatus used for transmitting and receiving radio messages. If we apply a force to a swinging door which has a spring attached, and open the door and hold it there, we have stored energy, for when we let the door out of our restraining hands, it will spring back to its normal position, and then continue to swing to the other side of its normal position, then back again to normal, and then to the side on which we originally held it. If we continued to apply energy to the door, this swinging motion back and forth would continue indefinitely. The swinging of the door back and forth creates air waves (do not confuse air and air waves with ether and ether waves—they are analogous but not the same). If a piece of paper were held on the other side of the room from where the door was swinging, the paper would soon vibrate in unison with the door, caused, of course, by the air waves. The problem in radio, therefore, is to cause vibrations in the ether by means of something similar to the

swinging of the door, and to build apparatus analogous to the paper to receive the ether vibrations.

It will be recalled that in the brief outline of electricity which we have given here, we referred to the spark that jumps from our finger to the chandelier after we have shuffled across the carpet, and that the reason we gave for this spark was that "the atoms in the adjacent bodies have respectively a superfluity and an insufficiency of electrons, and they are remedying these conditions by transferring sufficient electrons from the body with too many to the body with too few. Over-ambitious these bodies are, for the conditions are soon reversed, and the body that had an insufficiency has a superfluity, and vice versa. This condition reverses itself many times in a second, until the two bodies have attained their normal quota of electrons, when all is again serene and quiet."

We repeat this paragraph because it indicates one of the simplest methods of producing an oscillating electric current which radiates electro-magnetic waves. The frequency of such a current varies with the electrical constants of the two bodies. Such a method of creating electrical vibrations cannot be controlled. However, from such a crude beginning, inventors patiently worked to create a means of controlling oscillating currents that would radiate electro-magnetic waves. To-day this is accomplished with the modern transmitting vacuum tube. The

operation of a vacuum tube, or electron tube as it is also known, is complicated, and at the end of this chapter we refer the reader to several books which deal with this subject more or less exhaustively. Suffice it to say that the vacuum tube generates these high-frequency electrical currents in such a manner that they can be controlled and made to do the work required of them.

When one of these vacuum tubes is connected to an aerial, that is, a wire or series of wires suspended from a height, it causes electromagnetic waves to radiate from these wires. These waves travel in all directions and are received by a suitable receiving apparatus. By interrupting the radiation of these electrical waves at the transmitting station in pre-arranged intervals, electric waves can be made to correspond to the dots and dashes of the Morse code, in which case an intelligible message is received at the receiving station. If instead of interrupting these electrical waves in the form of dots and dashes, they be varied in accordance with the vibrations of the human voice, the receiving station will receive these vibrations in a more or less perfect reproduction of the human voice.

THEORY OF RECEIVING

Now as to the receiving station, here also a form of vacuum tube is generally used, but in this case to detect the radio waves, after which the signals are suitably magnified, also by means

of vacuum tubes so that they will produce in the telephone receivers or loud speaker, audible signals. The radio receiver is the counterpart of a transmitter, except that it has means of making audible the vibration received from the distant transmitter. When a receiver is tuned to the incoming waves, electrical vibrations are set up therein, which we must make audible. The detector and telephone receivers do this. The telephone receivers consist of a pair of electromagnets with a permanently magnetized core of steel and a metal diaphragm, capable of being magnetized. When a current caused by the incoming electrical waves passes through the magnets their magnetism is increased and the diaphragm is drawn toward the magnets, causing a click to be heard if the ear is close to the moving diaphragm. When the current ceases to flow, another click is heard as the diaphragm returns to its normal position.

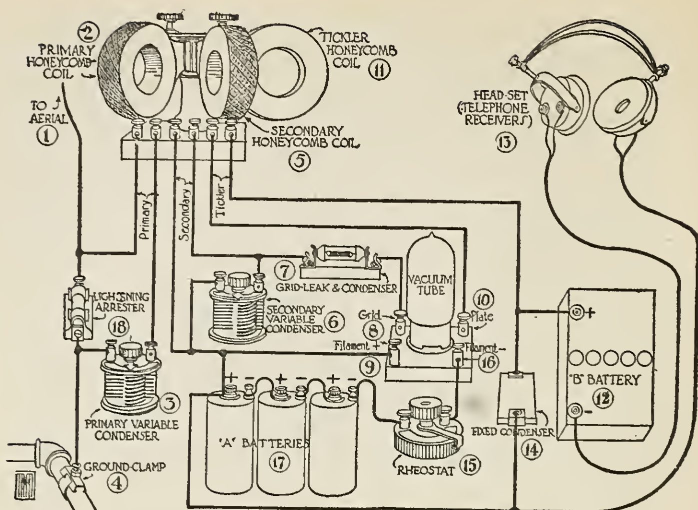
Now, as previously explained, the vibrations in the ether are produced by a rapidly alternating electric current, which if transmitted on a wave length of 200 meters, would be vibrating back and forth in opposite directions at the rate of 1,500,000 cycles per second. If we cause such a rapidly alternating current to pass through the magnets of the telephone receivers, the oscillations will be reproduced in the diaphragm by a motion back and forth. This motion of the diaphragm, when within the limits of the range of the human ear, produces sound waves. If,

for instance, we have an alternating current of 256 cycles passing through the magnets, the tone produced would be middle C. As long as the frequency of the current is within the range of audibility, that is, below 15,000 cycles per second, we are able to hear it in the telephone receiver, but when it becomes greater than this, the movement of the diaphragm cannot be heard by the human ear. Therefore, if we are receiving the oscillations from a 200-meter wave, the surge back and forth at the rate of 1,500,000 per second is far beyond the range of audibility. This high-frequency, alternating current must be transformed or rectified into direct current, so that it will produce an audible signal in the telephone receiver.

Vacuum tubes and certain minerals have the ability to conduct a current of electricity in one direction only (rectify) and are used as detectors in radio. Among the rectifying minerals are: carborundum, molybdenite, silicon, galena and numerous others. Of these, galena is probably the most sensitive.

A SIMPLE RADIO RECEIVER

The reader is perhaps by this time anxious to commence actual radio work. For this purpose, we must limit ourselves to the description of only one of the many types of apparatus that can be successfully constructed and operated by the beginner. We believe that a three-circuit honeycomb coil regenerative set is the easiest efficient



HONEYCOMB COIL RECEIVING SET USING ONE VACUUM TUBE

set to construct and operate. The rather long and involved name need be no deterrent. The type is chosen because it is simple; it is selective, that is, it can tune in the station desired and eliminate the others; it is sensitive, having, under average conditions, a thousand mile night range, and at times greater distances can be received; and it is universal regarding wave length. By changing the honeycomb coils, wave lengths from 175 to 26,000 meters can be received. This covers practically the entire range of useful wave lengths at the present time.

The honeycomb coil is a specially wound coil of wire used for tuning purposes. It derives its name from the fact that the wire is wound

in such a manner as to give the appearance of a honeycomb.

We have called this a three-circuit set. Let us proceed to explain. The first circuit is called the primary, and consists of: (1) aerial, (2) honeycomb coil, (3) variable condenser, (4) ground connection. The primary circuit is tuned to the wave length desired by merely using the proper honeycomb coil, as is designated in the table, and adjusting the variable condenser. This being accomplished, the second circuit or secondary, as it is known, is tuned to the same wave length as the primary. The secondary consists of: (5) honeycomb coil, (6) variable condenser, (7) grid leak and grid condenser, (8) grid of vacuum tube, (9) positive connection of A battery and vacuum tube filament.

The signals received by the primary circuit are induced into the secondary circuit. By induction, we mean transferred without physical connection. The induction of current from the primary to the secondary is controlled by varying the proximity of the two honeycomb coils.

The third circuit is known as either the plate circuit or the tickler coil circuit, and consists of: (10) plate of vacuum tube, (11) honeycomb coil, called feed-back or tickler coil, (12) B battery, (13) telephone receivers, (14) fixed condenser of about .001 microfarads, (+) positive connection of vacuum tube filament and (17) A battery.

The purpose of the third circuit is to increase

the sensitiveness of the receiver. The completed receiver connected is shown in the diagram. The reader is advised to mount the set in accordance with the mechanical and electrical necessity of the types of parts he buys. There is wide latitude in buying parts for the above outlined set, and method of construction and mounting should be advised by the shop in which the parts are purchased.

HONEYCOMB COIL TABLE [2]

The following table indicates the size coils to be used for the various wave lengths. Honeycomb coils have been standardized and can be purchased under these numbers.

WAVE LENGTH IN METERS	PRIMARY COIL NO.	SECONDARY COIL NO.	TICKLER COIL	PRIMARY CONDENSER
145-350	35	25	35	Series
305-710	75	50	35	Series
635-1660	150	100	75	Series
845-1970	200	150	100	Series
1420-2850	300	250	150	Series
2550-4250	200	300	150	Parallel *
4200-6300	500	400	200	Parallel *
6250-14,500	1250	750	400	Series
13,600-21,000	750	1250	400	Parallel *

* Diagram p. 76 shows primary condenser in "series." To connect it "parallel," as the table here calls for, the two terminals of the condenser must be connected respectively to the two terminals of the primary tuning coil, one terminal being also connected to the ground and the other connected to the aerial. A switch is generally used for making this change quickly.

[2] "The Book of Radio," by Charles William Taussig, published by D. Appleton & Co.

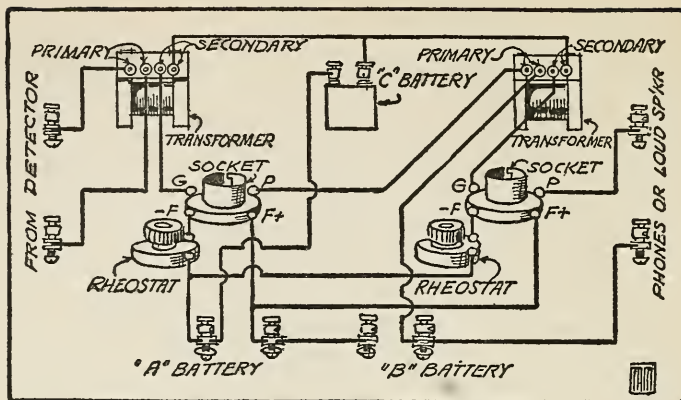
"LE STRYGE," BY MERYON.
Etching, 155 mm. x 116 mm.

"A SUNSET IN IRELAND," BY HADEN.
Etching, 8½" x 5½".

HOW TO OPERATE RECEIVER

The proximity of the coils to one another is called coupling. To operate this receiver, the proper coils should be used as indicated. The filament current is turned on and regulated by means of the rheostat (15). Proper voltage and current are usually designated by the manufacturer of the particular vacuum tube used. The coils are first closely coupled, then the primary condenser (3) is adjusted, after which the secondary condenser (6). When the primary and secondary coils are coupled closely, the tuning will be broad, therefore the desired station is usually heard in this preliminary tuning, before the circuits have been accurately tuned. After the primary and secondary have been adjusted, the tickler coil should be moved nearer to or further away from the secondary until the desired signal is brought in louder, and all hissing or squealing noise eliminated. Then the primary coil (2) is coupled more loosely and the tickler coil (11) is again readjusted. Finally the rheostat (15) is readjusted. It must be remembered that the looser the coupling, the more selective the receiving.

It will be noted that when the hand is brought close to one of the control knobs on the receiver, the signal will be affected and, in fact, at times it will be completely tuned out or a hissing or whistling noise will be heard. This is due to the capacity effect of the body, which changes the



TWO-STAGE AUDIO-FREQUENCY AMPLIFIER

wave length of the receiver. To eliminate this, it is necessary to line the inside of the cabinet with metal, and connect it to the ground.

If it is desired to use a loud speaker with this set, two stages of audio frequency amplification are necessary. This necessitates the use of two more vacuum tubes, and two transformers, as in the illustration. The primary of the first transformer is connected in place of the telephone receivers in the receiving circuit.

BATTERIES

The same A battery can be used for all three tubes, but it is better to use a separate B battery for the receiving circuit and the amplifier circuit. The B battery for the detector should be prescribed by the manufacturers of the detector

tube, usually from 19 to 45 volts. The same applies to the amplifier tubes, where the voltage usually range from 45 to 135 volts. The C battery shown in the amplifier diagram is from 4½ to 9 volts according to type of vacuum tubes used. The purpose of the C battery is to prevent distortion.

For the particular make of parts to be used with this set, the reader is referred to any reliable radio shop in his vicinity.

TYPES OF RADIO SETS

There are so many varieties of apparatus now on the market that it is beyond the scope of this book to go into a detailed discussion of them. For receiving short waves only (broadcasting and amateur), the following table of types of receivers and relative sensitiveness may be helpful.

TYPE OF RECEIVING SET	NO. OF TUBES	EASE OF CONTROL	SELECTIVITY AND DISTANCE
Regenerative, with two stages audio frequency amplification, such as honeycomb coil set here described or similar set, using other tuning apparatus, viz., variometer and vario couplers	3	fair	good
One-stage radio-frequency, tuned radio-frequency preferred, and two stages audio-frequency ...	4	good	good
Reflex, using mineral detector, three stages radio-frequency and two or three stages audio-frequency. Can be used with a loop aerial or indoor aerial ..	4	good	good

TYPE OF RECEIVING SET	NO. OF TUBES	EASE OF CONTROL	SELECTIVITY AND DISTANCE
Two-stage tuned or untuned radio-frequency and two stages audio-frequency. Can be used with loop aerial or indoor aerial	5	fair	very good
Neutrodyne—indoor aerial can be used	5	excellent	very good
Super-heterodyne—loop aerial ..	6-9	usually excellent	excellent

Description of these various types of radio receivers would be out of place in this book, but the appended bibliography will guide the reader to suitable books and periodicals, in which the necessary information and instruction may be found.

AERIALS

The aerial should consist of one copper or phosphor-bronze wire about one hundred to one hundred and fifty feet long, and as high above the ground or roof as possible, within reasonable limits, of course (not over fifty feet.) It should be insulated with porcelain or composition insulator from all contact with buildings, etc. With certain types of sets shown in the table, loop aerials are satisfactory. Indoor aerials can also be used with sets so designated.

GROUND.—LIGHTNING PROTECTION

The ground connection should be made by means of a ground clamp or bare wire wrapped

around a water pipe or any other metal that is ultimately buried in the ground, with the exception of a gas pipe. Where the aerial enters the window, a lightning arrester should be connected between it and the ground. This consists of two electrodes, separated by a small space enclosed in a vacuum. When an excessive charge of static electricity, say during a thunderstorm, is in the aerial, it jumps this tiny gap to the ground, thereby doing no damage to the instruments or the house. An aerial so protected acts as a lightning rod and safeguards the house from being struck.

DRY CELL VACUUM TUBES

Altho the vacuum tubes which require storage batteries to light their filaments are slightly more sensitive than the dry cell tubes, we recommend the latter, as their small deficiency in sensitiveness is more than compensated by the economy and ease of operation. The use of dry cell tubes makes for portability. We have built a complete three-tube receiver in a Corona typewriter case, using flashlight batteries to light the filaments of the tubes. The set was very compact, and telephone receivers, aerial wire and all equipment were included in the case. When we traveled, we carried the set with us, and all that was necessary to receive was to drop one end of the aerial wire out of a hotel window, and connect the ground wire to a water pipe.

RADIO WORKSHOP

If the constructing of radio sets is contemplated, it is advisable to equip the den or workshop with the necessary tools. The following are advisable: work bench, screw driver, hack saw, combination set of awls, chisels, screw drivers, etc., cross-cut saw, mitre-saw, various files, set of chisels and gauges, sandpaper and emery paper, iron vise, brace and bits, breast drill, various shaped pliers and wire cutters, electric soldering iron, solder, flux, hammers, rule, carpenter's square, caliper and dividers, set of screw taps and dies.

A supply of the following should be handy: nails, wood screws assorted, washers for round-head screws, wire of various sizes, small assorted brass bolts and nuts, stiff cardboard, soft wood as well as cabinet wood, glue, sealing wax, bakelite or other insulating materials for panels, shellac, hard rubber or bakelite knobs, dials, porcelain insulators, flexible insulated wire cord, tin foil, binding posts and terminals, sheet brass, "spaghetti" tubing, sheet copper, adhesive tape.

The appended bibliography designates several books and periodicals in which much can be learned concerning the construction of radio apparatus. There are numerous weekly and monthly magazines which go into considerable detail regarding the construction of radio sets.

RADIO

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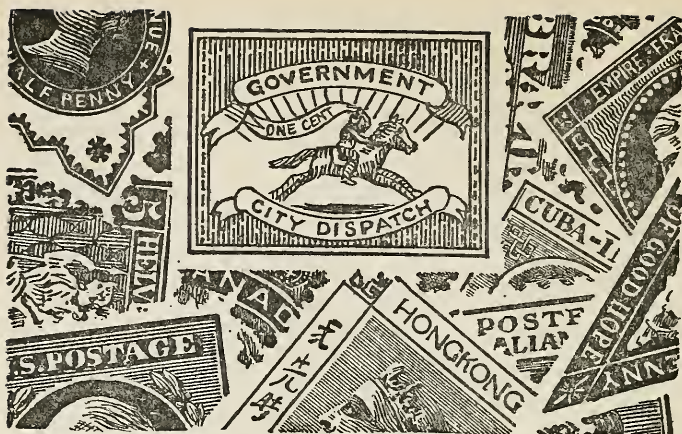

PHILATELY

IT was one of those drear, rainy days, when if one is fortunate enough to live in a house with an attic, fancy leads to that place of mystery and forgotten romance just under the slanting roof. Even the most careful of housewives is unable to keep the cobwebs from collecting in the old attic, and wisps from them tickled John's face as he stooped to pass under a cross-beam. His quest was an old chest that had belonged to his deceased grandfather, the opening of which John had long contemplated. To-day seemed particularly auspicious for delving into "long forgotten lore." The rain played a monotonous tattoo on the shingled roof as he bent over the dusty chest and commenced unfastening the rope with which it was bound.

The wind whistled ominously as he finally lifted the lid off the reliquary. It seemed like a remonstrance from the old man himself to leave his treasures alone. But these are the usual fancies that pass through our minds when we touch for the first time that which belonged to those who are no longer.

It is usually the case that these quests bring to light little of value or importance, but they fascinate for there is always the possibility of a find. John first unearthed some old photographs of bygone worthies which did not particularly appeal to him. Then came some old Civil War newspapers which crumbled at his touch, and were for that reason barely legible. Other souvenirs, of doubtful value, came out of the chest one by one and finally a packet of old letters. Had you asked John what he sought in that antiquated trunk, he would have told you, "Nothing in particular, just curious, that's all." But deep in his heart he had hoped to find such a packet of old letters—with stamps on them. What he withdrew from the yawning recess of the chest gave him a sudden thrill. For here in all their glory were twelve letters yellow with age, each bearing the ten cent stamp of the first United States issue (1847). And the other day he had noted that the new catalogue had shown an advance in value for this stamp. It was quoted by Scott at $25.00. It wasn't so much the monetary value tho that sent those joyful vibrations up and down his spine, but just the

old philatelistic joy of discovering rare stamps.

Of recent years stamp collecting or philately has become almost synonymous with "hobby." Strange enough, there is no other hobby in which a devotee takes a more ardent interest nor which is less interesting at first to an outsider. On the face of it, stamps are commonplace. Every morning the postman delivers a bundle of letters, each one bearing one or more stamps. To collect such ordinary things does at first blush seem ridiculous. But while it is part of the philatelist's pleasure to collect that which is commonplace, so that he may make his collection complete, it is his particular delight to secure specimens of the rare and extraordinary stamps.

Some time ago we were in the office of a large mail order house, watching the interesting manner in which hundreds of bags of mail were handled. Each letter was opened by a mechanical letter-opener. The operator of the machine, a rather bored looking individual, fed the mail rapidly into the hungry mechanism. We noticed him suddenly snatch a letter as it was about to go through the machine and lay it to one side. After the operations were over, he picked it up, and gazed intently at the envelope. On questioning him why this, out of the thousands which he handled, should be singled out for such careful scrutiny, he replied that he had noticed, as the letters flew by him, that the stamp on this one was slightly off-color

and as a collector of United States stamps such an irregularity had immediately attracted his attention. An off-colored stamp has a particular significance and often a considerable value to a collector. We recognized in this man the keenness of the philatelist. His mind and eye were trained for minutiæ.

To the layman the drawing at the head of this chapter has (we hope) a pleasing and suggestive appeal. To the philatelist, it has a deeper significance. The center stamp is of course recognized as one of the old U. S. carrier stamps issued at Baltimore in 1856. It is rare and of special delight to the philatelist. In the left-hand corner the philatelist and likewise the novice will recognize a portion of a well-known stamp. In the right-hand corner we get a peep at the triangular "Cape of Good Hope," beloved of all collectors.

The appeals of stamp collecting are many. There is, of course, the primal collecting urge. There is the romance of acquiring stamps; the historical association; the appeal of color and design; the competitive instinct; the mental traveling to far-off lands; and the love of old things.

STARTING A COLLECTION

One of the usual ways of starting a stamp collection is to save the stamps from foreign mail that comes into one's possession. Often in this

manner the desire to enter more deeply into philately is created. Such manner of acquiring stamps is out of the question once the collection is under way, it being decidedly unmethodical. Of all hobbies, stamp collecting of necessity is the most methodical. There are well over 40,000 distinct varieties of postage stamps issued to date, and the need of specialization is of course apparent. General collections are rare indeed among the philatelic cognoscenti.

Once a beginner has taken an interest in stamps, it might be well for him to purchase a large package of assorted stamps, say several thousand for a few dollars. Then, with the aid of a catalogue, he can arrange them in a blank notebook or inexpensive album, according to country and date of issue. Such procedure will familiarize him with stamps in general and guide him in the ultimate choice of a specialty.

One of the most interesting specialties is collecting U. S. stamps, but this can be also divided into many groups. There are envelope stamps, the official departmental stamps, U. S. colonial stamps such as Porto Rico, the Philippines, Hawaii, etc. The collection of the Confederate States stamps is an interesting, but rather expensive hobby.

WHAT TO AVOID

Aside from U. S. stamps, there are such interesting specialties as Great Britain, the British

Colonies, Continental stamps, France, the French Colonies. Dr. Johnson [1] suggests that the following be avoided:

1. Never allow more than five per cent. of the specimens of a general collection to be of South or Central American origin. Even though every item may be above suspicion, it is not well to devote more than average attention to these countries.

2. Where a government provides new issues annually, cease collecting its stamps. The multiplication of sets which must accumulate in the course of a few years will operate against a rise in values, and the inference may be reasonably drawn that these stamps are being issued for collecting rather than postal requirements.

3. In cases where unused stamps are catalogued at a lower figure than the same specimens used, make inquiries before buying the former. Such instances should arouse suspicion.

4. If at any time there appears on the market a glut of unused copies of a particular variety or set, do not purchase unless it is known that they are not reprints or remainders.

5. Countries that habitually sell their remainders in large quantities should be avoided.

6. When unused stamps in good condition are offered at less than face value, make enquiries before buying. They are probably remainders, tho in exceptional cases they may be speci-

[1] "The Stamp Collector," by Stanley C. Johnson.

mens that are being dispersed by disappointed speculators.

7. Commemorative issues are too often of doubtful value; be especially cautious when the period of their currency is but a few days and the country of issue has not the best of records.

8. Stamps that display errors should only be regarded as valuable when issued by a trustworthy government, and the error may be assumed to be a bona-fide one.

9. Do not think that South and Central America alone provide undesirable stamps. Worthless material has originated in Europe, Asia and Africa.

10. Never buy obliterated stamps with the original gum in a mint (uncanceled) condition, and be cautious of obliteration marks consisting of bars and circles, but without date and name of town. There are many such canceling stamps that are above reproach, but more that are not.

11. Because a stamp is of an attractive design, do not conclude that it is necessarily one of the "made-for-collectors" variety. It all depends on the country issuing it.

A RARE FIND

Rare stamps have a great fascination, not merely because of their great monetary value, but because of the feeling that each one of us has that perhaps some day we may come into possession of one of these rarities in some unusual way. An interesting story in connection with a

valuable find is told by Mr. N. W. Taussig, philatelist, formerly editor and publisher of the old "New Jersey Philatelist." Mr. Taussig was specializing in United States revenue stamps. He had purchased some from a reliable dealer, and noticing one was slightly torn he returned it and received credit for its full value, to wit, 25c. As he was leaving the shop, the dealer called his attention to a large box of revenue stamps which he was closing out at 25c each, and suggested that Mr. Taussig take one of these stamps to balance his account. Mr. Taussig assented and looked over the assortment in the box. He found the $2.50 revenue (1869) which he required to fill out a set, and left the shop satisfied. As he was riding home, he took out the stamp, as most collectors will do, to admire his acquisition. To his amazement, he noticed that the center, the head of George Washington, was inverted. He thought he recognized what he had, but wanted to confirm it before he would believe his good fortune. Before reaching home he visited an appraiser who verified the stamp as one of four known copies of this error. Later, Mr. Taussig sold the stamp for $250.00 through the dealer from whom he had purchased it. If Mr. M. reads this, he will learn for the first time where Mr. Taussig acquired the stamp. The stamp has since changed hands a number of times, once for the sum of $1,000. It is worth somewhat less than that now, as several other copies have come to light.

STAMPS OF GREAT VALUE

The rarest stamp in the world is the one-cent British Guiana of 1856, of which only one stamp is known to exist. The stamp was purchased by Mr. Hind for the record price of $32,000.00.

Another famous stamp of great value is the Post Office Mauritius. Only about twenty-five copies are known to exist, and quite recently King George V purchased one for $7,250.00.

Interesting errors occur in the triangular stamps of the "Cape." They are the 1d blue and the 4d vermilion. The regular stamps are the reverse, that is, the 1d is vermilion and the 4d is blue. It seems that a local printer in Cape Town was requested on short notice to supply a quantity of these stamps. In assembling the stereos of the stamps into the plates, he inadvertently put one of the 1d value in the 4d plate, and a 4d value in the 1d plate. Thus the error of color occurred. The used 1d blue has sold for $375, and the only known unused copy of the 4d vermilion brought $2,500 at auction.

Guy Wetmore Caryll in his amusing poem "How the Peaceful Aladdin Gave Way to His Madness" says of Aladdin's new wife:

"When gladly he chose her,
He didn't suppose her
A philatelist, always agape
For novelties, yet
She had all of the set
Of triangular stamps of the Cape.

Some people malicious
Proclaimed her Mauritius
One-penny vermilion a sell.
But that was all rot. It
Was true she had got it,
And the tuppenny blue one as well!

"Since thus she collected,
As might be expected,
She didn't for bric-a-brac care,
So she traded the lamp
For an Ecuador stamp
That somebody told her was rare!
This act served to madden
The mind of Aladdin,
But, 'spite of his impotent wrath,
His manor-house vanished,
To nothingness banished,
And while he was taking a bath!"

Another rare stamp is the 2-cent blue of Hawaii (1851). Most of these stamps were destroyed in a fire in Honolulu and the dozen or more copies remaining are mostly owned by Mr. H. J. Crocker of San Francisco. This stamp is worth several thousand dollars.

EARLY HISTORY

It was early in the reign of Louis XIV that the idea of postpaid or stamped paper originated with M. De Velayer, who in 1653 established a private penny-post. Boxes were placed at the corners of streets for the reception of letters

wrapped up in envelopes. These envelopes were franked by bands or slips of paper tied around them with the inscription "Postpaid the ——day of —— 1653 or 54." These slips were sold for one sol, and could be procured at the palace, at the turntables of convents and from the porters of colleges.

When Louis XIV would leave his habitual residence, the personages of his suite were accustomed to procure these labels or stamps, intended to be placed around letters destined for Paris. Ordinary business matters were handled also in this early post. Special forms were printed under the direction of M. De Velayer for this purpose. One of these special forms sent to Mademoiselle Lendery by Pilisson is still preserved in Paris and is one of the oldest specimens of a prepaying envelope.[2]

These primitive slips and forms were irregularly used and soon fell into disuse. In 1758 a wealthy Parisian established in the metropolis a modest post, charging two sols for single letters under an ounce, which were prepaid by stamps similar to those now in use. The French government soon perceived that this private post office was a paying proposition, and forthwith took it from him. He was compensated with an annual pension of twenty thousand francs. The government facilities were poor for this early postal service and soon the sale of stamps fell off to such an extent that the post was abandoned.

[2] Harper's Magazine, October, 1871.

Spain was the next country to issue stamps. This was authorized by a royal decree on the 7th of December, 1716. The stamps were in the form of a seal bearing the Royal Arms of Castile and Leon, but were only for official business. They remained in use until the beginning of the nineteenth century, when their issue was entirely abandoned.

Semi-official stamped postal envelopes were used in Italy (Sardinia) from 1819 until 1836. On the 7th of November, 1818, the issue of stamped postal paper was announced. This paper was prepared under the supervision of the Postal Authorities and could be procured at post offices and from vendors of tobacco, who received a commission upon their sales. There were three values: 15, 25 and 50 centesimi, all bearing the same device. These stamps were but little used and were finally withdrawn by royal decrees on March 30, 1836.

About that time an attempt was made to create a postal service in Sweden, but after a hard fight the assembly of Swedish nobility defeated the measure.

START OF MODERN POSTAL SYSTEM

The real father of the modern postal system, however, was Sir Rowland Hill, who introduced a postal service bill into the British Parliament in 1837, which among other reforms proposed that letters should be prepaid by means of stamped covers or envelopes. His proposition

met with much opposition. Fortunately thousands of petitions poured in for the furtherance of the innovation and finally the bill was adopted and put into operation on the 6th of May, 1840.

It did not take long for the collecting of postage stamps to commence after they were once in permanent use, for Dr. Grey of the British Museum began to collect stamps in 1841. By 1860 stamp collecting was a serious pursuit.

The first stamps issued in Great Britain were placed on sale on May 6th, 1840. They are known to-day as the "Penny Black" and the "First 2d Blue." These early stamps are engraved and have considerable artistic value. The outstanding feature is a beautiful head, in profile, of Queen Victoria, which was copied from the obverse of a medal struck by William Wyon to commemorate Victoria's first official visit to the City of London after accession to the throne.

One of the most interesting early issues was the Mulready envelope. This envelope came out in 1840, coincident with the "Penny Black," but for some reason, probably the rather involved design by W. Mulready, R. A., the envelope was subject to much ridicule, and so few were sold that it was withdrawn from sale. The Mulready envelope has become rare.

EARLY UNITED STATES STAMPS

It is not the purpose of this chapter to go into a full history of postage stamps and philately,

for that subject would require several volumes. A word or two, however, should be said about United States stamps.

In 1845, the United States commenced issuing stamps. The first stamps were local issues and are known as "postmasters' issues." At that time the cities and towns had jurisdiction over their own postal service and issued their own stamps. The following places are known to have issued stamps: Alexandria, Va., Annapolis, Md., Baltimore, Md., Boscawen, N. H., Brattleboro, Vt., Lockport, N. Y., Millbury, Mass., New Haven, Conn., New York, N. Y., Providence, R. I., St. Louis, Mo., and Tuscumbia, Ala. These stamps are extremely rare and have great value.

$12,000 FOR A STAMP!

Mr. Arthur Hind, who has the most valuable collection of stamps in the world, valued at over $1,000,000, paid $12,000 for the only known copy of the Boscawen stamp. This stamp is on the entire envelope and bears no cancellation. It has no perforation and is printed in a dull blue ink on very thin paper. In the upper left corner of the envelope is the manuscript notation, "Boscawen, N. H., Dec. 13" written by the postmaster at the time of mailing. It is addressed to Concord, N. H. The unique stamp was formerly in the collection of Hiram E. Deats of Flemington, N. J., and later passed into the famous collection of Baron P. von Ferrary.

Ferrary's collection, begun in 1865, was known as the "philatelic graveyard," because it was always understood that the collection would never be sold and would ultimately be given to the Berlin Postal Museum. The collection was, however, finally sold at auction, much of it being purchased by Mr. Hind. Almost the entire State of New Hampshire has been searched and ransacked for the Boscawen stamps, but no other copy has ever been found.[3]

Mr. Hind is also the possessor of the Lockport stamp which is valued at $8,500. Not long ago a pair of postmaster's St. Louis 20 cent black (1845) brought over $5,000 at auction.

In 1847 Congress abolished local postal service and provided for a centralization of the post office. They issued then, the first regular U. S. postage stamp. There were two values,—a 5c stamp with a profile of Benjamin Franklin and a 10c stamp bearing the picture of George Washington. These stamps to-day in good condition are catalogued at $6 and $25 respectively. In purchasing them care should be taken not to procure, under false assumption, the reprint that was made by the U. S. Government in 1875 for its exhibit at the Centennial Exposition at Philadelphia. Recently an interesting find of these old stamps was unearthed. It illustrates some of the romance to be found in stamp collecting.

[3] The Collectors' Club Philatelist, October, 1922.

THE PROSSER FIND

An old firm, Thomas Prosser & Sons, in New York, had collected in the course of years a lot of old paper of which they decided to rid themselves. In sorting and arranging it in bales they found a number of envelopes bearing old stamps which they sold to a Nassau Street stamp dealer. The paper was sold to a paper junkman. The stamp dealer hearing of the origin of these old stamps felt that Prosser had possibly overlooked other stamps in the bales. The dealer located the junkman but learned to his dismay that the paper had been sold to a New England paper-mill. Undaunted, the stamp dealer went to New England and bought the old paper from the mill. His efforts were not in vain, for many old and rare stamps and envelopes, including a number of specimens of the original issue of 1847, were recovered.

MINUTE VARIATIONS

The second series of U. S. stamps was issued during the period of 1851-60. Congress passed two bills which necessitated this issue. One lowered the postal rate and of course created the need of values lower than 5c. The other bill made prepayment of postage obligatory. Heretofore prepayment of postage was optional. Naturally more stamps were now needed. Altogether eight different denominations were issued. The collector of U. S. stamps, however,

has not completed his collection for this period with the acquisition of eight stamps. No, that would be too easy and thereby take away much of the charm of collecting. The stamps of this issue were line engraved and from time to time the plates would be slightly altered, creating of course a new type of stamp from the philatelic viewpoint. These changes usually affected the outer framework of the stamp. The first of this issue were not perforated, but in 1857 perforated stamps were inaugurated.

HISTORICAL ASSOCIATION

Considerable interest in stamp collecting is due to the historical associations that are to be found in stamp issues of the world. Almost all political events of importance are reflected in the stamps of the time. The Civil War afforded no exception to this, and it is interesting to note the changes in postage stamps during that time. It is best told by the Postmaster General in his report of 1861:

"The contract for the manufacture of postage stamps having expired on June 10th, 1861, a new one was entered into with the National Bank Note Company, upon terms very advantageous to the Department, from which there will result an annual saving of more than thirty per cent. in the cost of the stamps.

"In order to prevent the fraudulent use of the large quantity of stamps remaining unaccounted

1c Blue 3c Red 5c Brown 10c Green 12c Black

Arrows indicate location of principal points of difference.

ISSUE OF AUGUST, 1861

1c Blue 3c Red 5c Brown 10c Green 12c Black

Compare this issue with that shown in the row above.

ISSUE OF SEPTEMBER, 1861

90c Blue - August 90c Blue - September

A PHILATELIC FEAST

for in the hands of postmasters in the disloyal States, it was deemed advisable to change the design and the color of those manufactured under the new contract and to substitute as soon as possible the new for the old issues. The old stamps on hand, and such as were received in exchange at the larger offices have been to a great extent counted and destroyed."

1861-66

The first of the new stamps (eight values) were issued in August, 1861, but they were un-

satisfactory and were consequently withdrawn. A second series was issued in September of the same year. The August stamps, known as the "premières gravures," are rare, due to the limited number printed. The differences between these rare stamps and the September issue are in some cases slight and require the use of a magnifying glass to detect, but it is just this sort of detail that adds fascination to the hobby. The cut on the preceding page indicates some of the differences in these two issues. The relative prices from Scott's catalogue illustrate the importance of these details to the collector. The 1c (1861) "premières gravures," unused, is quoted at $1,000 and the second issue (1861) unused at $1.50. The difference in the two stamps is a shade in color and an almost microscopic variation in the outer framework of the stamp.

Two values were added to the 1861-66 issue at a later date. These were the 2c black with a large head of Jackson and a 15c black with head of Lincoln. The entire issue then of ten stamps consisted of one cent (Franklin), two cents (Jackson), three cents (Washington), five cents (Jefferson), ten cents (Washington), twelve cents (Washington), fifteen cents (Lincoln. This was the first stamp to bear the head of the martyred President), twenty-four cents (Washington), thirty cents (Franklin), ninety cents (Washington).

This issue was also reproduced for the Centennial Exposition some ten years later.

EMBOSSED GRILL

In 1867 the stamps were again changed, but this time merely by the addition of an embossed grill to the surface of the 1861-66 issue in order to prevent the erasure of the cancellation marks by thrifty persons who did not think a stamp had done its duty by making one trip through the post office.

The issue of 1869 was, according to many minds, the most beautiful of all the United States stamps previously, and for that matter, subsequently issued. It consisted of ten small, almost square stamps of the pictorial type. Notwithstanding the charm that these stamps had for the philatelic mind, they for some obscure reason, aroused the ire of "General Public," and were consequently withdrawn within twelve months. The stamps are to be found both with and without the grill. They were also reproduced in 1875 for the Centennial. It might be well to add here that these reprints as well as all the 1875 reprints can be distinguished from the originals by the lighter paper and whiter gum used on the reprints. Quite naturally the value of the originals is much greater.

1870.

This short-lived set of stamps was superseded in 1870 by another issue. This set was designed so that each stamp bore the bust of some distinguished American as follows: 1 cent, Frank-

lin; 2 cent, Jackson; 3 cent, Washington; 6 cent, Lincoln; 7 cent, Stanton, Secretary of War in Lincoln's Cabinet; 10 cent, Jefferson; 12 cent, Clay; 15 cent, Webster; 24 cent, General Scott; 30 cent, Alexander Hamilton; and the 90 cent, Commodore Perry. The stamps at first had a grilled surface but later this was omitted. They were the last to have the grill, as it was found that people used the grill to tear the stamps apart, instead of separating them by means of the perforations. This issue of stamps appeared in a number of different shades, which furnishes an interesting problem to the philatelist. Another interesting feature of this issue is the secret marks on the stamps. These marks were introduced in the plates in 1873 when the contract for printing was transferred from the National Bank Note Co. to the Continental Bank Note Co. The old plates were used and the new contractors, wishing to distinguish their work from the work of their predecessors, introduced a secret mark indiscernible to the public but sufficient for their purpose. To the eagle eye of the philatelist these marks stand out prominently, notwithstanding the need of a magnifying glass. In 1875 a five cent stamp was added to the set in order to care for the increasing foreign correspondence. This stamp bore the portrait of General Taylor.

In 1882-3 it was decided to put the profile of Washington on the two cent stamp, as this was in most use. There seems to have always

been a feeling in the United States for Franklin and Washington to appear on postage stamps, and their busts and portraits appear much oftener than any other.

Jackson, who was removed from the two cent stamp to make room for the illustrious father of the country, was enthroned in a new denomination, a four cent stamp. Garfield, recently assassinated, was portrayed on the five cent stamp in place of Zachary Taylor.

In 1887-8 some slight changes were made and in 1890 an entirely new set of stamps appeared. These stamps were smaller in design than previous issues. Several alterations to the plate of the two cent stamp of this issue were made, affording, of course, delight to the philatelist, who must have a copy of each successive stamp bearing the changes.

COLUMBIAN ISSUE OF 1893

We now come to the first of the commemorative issues, the Columbian issue of 1893. Almost all commemorative issues of every country are regarded by philatelists with suspicion. The popularity of stamp collecting gave rise to the pernicious practise of producing stamps for the sole purpose of selling them to collectors and not the avowed purpose of providing a method of payment for postal service. This deceit,—and it can be called nothing better,—is practised in several countries, particularly in South and Central

American countries, and it is a blot on the name of our Post Office Department to know that we also have stooped to this mean method of raising a little additional revenue. Philatelists soon discover these tricks and put a value on the stamps accordingly. Unused stamps of high value from these questionable issues can often be purchased at less than their face value. The following quotation is taken from F. J. Melville's "United States Postage Stamps 1870-1893." The words are attributed to Senator Wolcott:—"I have been at a loss to understand why the Columbian stamps were ever manufactured. I find upon referring to the report of the Postmaster General, in which he asks, and very properly, for increased appropriations, appropriations aggregating some eighty million dollars, that he expects to receive one and a half million dollars extra profit out of these stamps by selling them to stamp collectors. This is a trick practised by the Central American States when they are short of funds. They get up a new stamp and sell to stamp collectors all the world over, and get money for it. It seems to me that this is too great a country to subject sixty million people to the inconvenience of using this big concern in order that we may unload cruel and unusual stamps upon stamp collectors to fill in their albums."

A vivid illustration of this abuse is to be found in Dr. Stanley C. Johnson's admirable book, "The Stamp Collector." Writing of San Ma-

rino, he says: "There have been so many celebration issues and remainder stocks of this little republic that the confidence of philatelists has been considerably shaken. Here is one of four letters which we have personally received from the postal authorities. It speaks for itself:—

REPUBLIC OF S. MARINO.

SIR:

I have the honour to inform you that you can obtain our commemorative stamps at a rebate of 30, 40 and 50 per cent. according to the importance of your order which must reach at least the figure of 20 pounds.

In the hope that you will transmit to me your orders, to which I will devote all my attention,

I remain, Sir,

Yours devoted,

V. SERAFINI, *Secretary.*

4, June, 1895.

Notwithstanding the ulterior motive in issuing the Columbian stamps, they are of considerable interest. There are sixteen values, each depicting scenes or portraits reminiscent of Columbus:

1 cent (blue) Columbus in Sight of Land, from a painting by William H. Powell.

2 cent (purple) The Landing of Columbus, from the painting by Vanderlyn in the Capitol at Washington.

3 cent (green) Columbus' Flagship the *Santa Maria,* from an engraving.

4 cent (light ultramarine). The fleet of Columbus, the *Santa Maria,* the *Pinta* and the *Nina.* One sheet of this value was printed in a shade about the color of the one cent value. Scott catalogues this error at $125.00.

5 cent (brown) Columbus Soliciting the Aid of Isabella, from a painting by Brozik in the Metropolitan Museum of Art, New York.

8 cent (claret) Columbus Restored to Favor. Painted by F. Jover.

10 cent (brown) Columbus Presenting Natives, after a painting by Luigi Gregori in the University of Notre Dame, South Bend, Ind.

15 cent (dark peacock green) Columbus Announcing His Discovery, after a painting by Balboa in Madrid.

30 cent (orange-brown) Columbus at La Rabida, after a painting by Maso.

50 cent (steel-blue) The Recall of Columbus, after a painting in the Capitol at Washington by A. G. Heaton.

1 dollar (scarlet) Isabella Pledging Her Jewels, after a painting in Madrid by M. Degrain.

2 dollar (lake-red) Columbus in Chains, after a painting at Providence, R. I.

3 dollar (yellow-green) Columbus Describing His Third Voyage, painted by F. Jover.

4 dollar (carmine) Two portraits in medallions, Isabella on the left and Columbus on the right.

5 dollar (black) A medallion portrait of Columbus. This was a facsimile of the profile that

appeared on the half dollar coin struck as a souvenir of the Chicago Exposition.

The unused stamps of the Columbian issue have a questionable value to collectors because of their unhealthy origin, but the canceled stamps which have had actual postal service have their legitimate place in the collection. Thus far the United States has not been guilty of issuing canceled stamps for philatelists, a practise which is often followed by South American and Central American countries whose uncanceled stamps have thus fallen into philatelic disfavor. The cancellation is supposed to add veracity to the issue. These stamps are usually issued without gum, to give the appearance of having been soaked off envelopes. The microscope soon detects, however, the origin of such a stamp, as no matter how carefully a genuine stamp has been soaked, microscopic bits of gum remain. The "trick stamp" usually shows no gum at all.

From 1894 until the present time the printing of stamps has been done by the Bureau of Engraving and Printing, an agency of the United States Government. The first work of the Bureau was from the plates of the issue of 1890, with the added distinguishing mark of a double-lined triangle in either upper corner of each stamp. Several other changes were made. The 30 cent stamp was eliminated and a 50 cent stamp substituted. The 90 cent stamp gave way to the 1 dollar and two new denominations were

added, viz., a 2 dollar and 5 dollar stamp. There were numerous variations to the 2 cent stamp of this issue, which affords much opportunity to the collector to use his reputed faculties of close observation.

WATERMARKED PAPER

In 1895 watermarked paper was employed in the United States for the first time. The letters U. S. P. S. were adopted as the pattern. Watermarked paper is a most important item in stamp collecting as it is one of the means of distinguishing certain issues and also for detecting frauds. The letters "U. S.P. S." were so arranged on the paper that one letter or parts of two, three or four letters are shown on each stamp. The collector usually immerses a stamp in benzine in a black glass cup to bring out the watermark clearly. Dr. Johnson illustrates the importance of watermarks in the following: (He refers to the 4d carmine of Great Britain issued in July 1855). "This specimen bore a watermark known as the small garter, and as a medium garter was substituted in the following February and a large garter a little later, we must examine this value carefully. An unused copy of the small garter on blued paper is worth 16 pounds ($80) ; on white paper it is almost unobtainable. When the garter is of medium size and the paper is blue, the stamp is cheap at 25 pounds ($125), though 12 pounds ($60) will buy it on white

paper. The large garter watermark is least rare, unused copies in this case being priced at about two guineas ($10). Used specimens of the three values vary between a shilling and three pounds."

TRANS-MISSISSIPPI EXPOSITION (1898)

In 1898 certain changes were made in the color of the previous issue of U. S. stamps in order to conform to the requirements of the Postal Union. The designs were left unchanged. In this year, also, another of the doubtful commemorative stamps was issued. This was done at the behest of the promoters of the Trans-Mississippi Exposition of Omaha, who thought it a means of advertising their project. Philatelists on learning of the proposed issue protested but to no avail and in June, 1898, the stamps were issued. The stamps are interesting as a pictorial representation of the development of the Middle West.

PAN-AMERICAN EXPOSITION

The next issue of United States stamps was also a commemorative issue, for which by this time the United States was becoming notorious. With this series will always be associated the assassination of President McKinley, for the stamps were issued to exploit the Pan-American Exposition held in Buffalo. President McKinley

was assassinated while officiating at the Exposition. There were six values. Each stamp is printed in black with one other color. The subjects are a lake steamer, an express train, an automobile, the bridge over Niagara Falls, the Locks at Sault Sainte Marie Canal, and an ocean liner. Some of these stamps inadvertently were printed with the center picture inverted. They have a higher philatelic value than the normal stamps.

In 1902 a new regular issue of stamps was prepared and the issue of 1898 became obsolete. This set bore the imprint "Series 1902" and were the first United States stamps of a regular issue to bare the date of issuance. The two cent stamp of this issue was considered too elaborate in decoration and it was replaced by a simpler designed stamp in 1903.

LOUISIANA PURCHASE EXPOSITION (1904)

Again we come to another commemorative issue, the Louisiana Purchase Exposition held at St. Louis in 1904. This consisted of 1 cent, green, showing Robert Livingstone, U. S. Minister to France, who made the arrangements for the purchase of Louisiana from the French; 2 cents, red, with the portrait of Thomas Jefferson, President of the United States at the time of the purchase; 3 cents, purple, with James Monroe, who was special representative to France at the time of the purchase. The 5 cent, blue, showed

the martyred President McKinley, and the 10 cent, brown, gave a map of the United States, indicating the territory acquired through the Louisiana Purchase.

Notwithstanding ulterior motives that might have prompted some of these commemorative issues of which many more are to follow, it is patent that they are of value and of interest from an historical viewpoint.

In 1907 came the Jamestown Exposition stamps. The 1 cent pictured Captain John Smith, the founder of Jamestown; the 2 cent showed the landing of the first settlers in Jamestown; the 5 cent was a picture of Princess Pocahontas. Not less than thirty-two million of these stamps were printed.

In 1908 a new regular set of stamps were issued, due to the wearing out of the 1902 plates. There were a number of alterations to this set of stamps, much to the delight of the collectors.

In 1909 three commemorative stamps were issued. They were all two cent stamps. The first celebrated the centenary of the birth of President Lincoln, the stamp bearing his bust. The second stamp advertised the Seattle Exposition and the third was the Hudson-Fulton celebration stamp, with a view of the Hudson River and Hendrik Hudson's ship, the *Half Moon*.

In 1913 came the stamps commemorating the opening of the Panama Canal and advertising the World's Fair at San Francisco.

The regular issue of 1914-1915 made its ap-

pearance and was noteworthy for the 5 cent error. It seems that some of the dies of the 5 cent got mixed up with the 2 cent and were printed in the sheets in red instead of their proper color, blue. The error was detected after a considerable number had been printed.

In 1923 new designs appeared, and after the death of President Harding his portrait was placed on a 2 cent stamp printed in black—the first 2 cent stamp since the Columbian issue to appear in a color other than red. The series commemorating the Huguenot-Walloon Tercentenary was issued in 1924.

AIRPLANE STAMPS

The first airplane stamps in the United States appeared in 1918. They were 6 cent orange, 16 cent green and 24 cent rose and blue. Mr. N. W. Taussig is the possessor of the 24 cent stamp, canceled "first trip" on an envelope autographed by President Wilson. He paid $1,000 for it during the Great War, the money going to the American Red Cross.

THE LITTLE BOY AND THE CZAR OF RUSSIA

John N. Luff tells a charming story which we cannot resist quoting: "Years ago there went the rounds of the philatelic press a story of a little boy who wrote a letter to the Czar of Russia asking him for some Russian stamps, and was rewarded by a gracious reply and a present of a wonderful collection of stamps. We read it, said 'clever,' and forgot all about it.

"Later on the story was revived, but we had grown wiser,—or thought we had,—and had elevated our pastime into a science. We began to have doubts about the pretty little story,—it would do very well for children, but you could hardly expect us to take much stock in such tales. Then smart writers began to poke fun at it, and the fate of the 'Little Willie' story was sealed. It could not stand ridicule.

"Yet it was a good story and quite true after all. In a recent visit to some of the Western cities I learned the facts of the case. The boy who wrote the letter (he was eight years old at the time) is to-day a freshman at Cornell University. His parents live in Pittsburgh and have in their possession the stamps and the letter which accompanied them. The story is as follows:

"In the year 1895 the family was residing in Toronto, Canada. One day there arrived in the mail a bulky envelope addressed to Master B—— and sealed with a large seal bearing the Russian eagle.

" 'Oh,' said Master B——, 'the Czar must have answered my letter.'

" 'What!' said a member of the family, 'Do you mean to say that you have been writing to the Czar?'

" 'Yes; I heard he was a stamp collector, and I thought he might like some Canadian stamps, so I sent him a lot.'

" 'But you didn't say anything about this to any of us.'

" 'No, that is just what I told the Czar. I said, "Nobody knows I am writing to you but old Mary; she's Granny's cook." '

" 'Well, I hope you didn't ask the Czar for stamps?'

" 'No, I didn't ask him for any, but down at the bottom of the letter I said, "P. S.—If you have any duplicates, I'd like to have some." '

"Within the envelope addressed to Master B—— was the following letter:

AMBASSADE IMPERIALE
DE RUSSIE.
TO MASTER B——
15 St. Thomas St., South Hamilton, Ontario,

By order of the Emperor, the Imperial Russian Embassy in London has the honor to inform you that his Imperial Majesty has been graciously pleased not only to accept a collection of stamps sent by you, but to cause a collection of Russian stamps to be transmitted to you in return.

In forwarding the parcel addressed to you, the Imperial Russian Embassy begs to request you to send your receipt for the same to the Secretary of the Russian Embassy in London.

(Signed) *The First Secretary of the Embassy,*
KRAUPENSKY.

LONDON, 15th July, 1895.

"There were enclosed three sets of the Russian stamps then current, ranging in value from one kopec to seven rubles, also a quantity of envelopes, wrappers and postal cards. There was also enclosed a receipt which gave a detailed list of the stamps and stationery. This was written in Russian and, being somewhat of a curiosity, was retained, and another receipt, written in English, sent in its stead.

"The family of the young man have carefully preserved the letter and its contents as an interesting relic of his childhood days."

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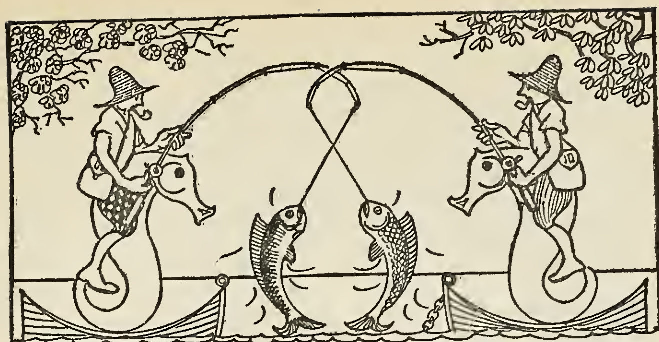


ANGLING

"God never did make a more calm, quiet, innocent recreation than angling."—*Izaak Walton.*

SURELY in the realm of hobbies there is none which satisfies more needs than does angling. The angler is at once a sportsman and a philosopher, for fishing provides the zest of pursuit, the inspiration of hope and the excitement of combat, with the peaceful contemplative quiet of woodland or sea. Wise is he who repairs himself to the remoteness of some mountain stream for a fortnight's commune with nature and piscatorial pursuits. For there in sylvan solitude will he find peace, health and ofttimes religion. As for fish, let us hope he finds them also.

The joy of angling is such that, whether or not the quest be rewarded with a catch, the outing is in itself a boon. Who can complain, though

empty be his creel, of a day spent wading up a babbling brook, through meadow and wood, urged on by the hope of landing some of the graceful, shining trout that are seen lurking in the deep pools or darting through the riffles. Truly, fishing is like life: hope, the spur and impetus; contemplation and philosophy, the balm and sustenance.

Usually when angling is given the dignity of an essay thereon, or made the theme of literary exposition, the more polite and classical form of fresh water fishing is the subject. We must, however, not forget those who love the tang of the ocean, who prefer for themselves the rolling waves and the gamey bluefish or even the vulgar cod, to the princely trout or the kingly salmon.

We hold no briefs for any particular kind of fishing, nor do we feel with many that angling is a science or art that must be carried on in strict accordance with rules and ritual. True, there is a right and a wrong way to fish, but the line of demarkation is no more definite here than in any of the other human affairs. There are, dear reader, angler fundamentalists as well as social, political and religious ones, and woe to the liberal fisherman who runs afoul them.

It is wise for the novice to permit the more experienced anglers to point the way, after which he can receive final instructions from nature and the fish themselves. Walton's tyro angler, "Venator," learned quickly enough the necessity of allowing plenty of line for a game

fish to play with, when he lost his first big trout by trying to force him to the landing net. The beginner who holds his rod in a more or less vertical position when he is playing a trout, bass, or salmon, soon discovers the error of his way, as fish after fish is lost, and he is then more careful about keeping his rod down.

FISHING FOR TROUT

Trout fishing is undoubtedly the most accessible kind of angling. There are few parts of the civilized world in temperate climes that have not an abundance of trout streams within easy reach. Fly-fishing for the speckled trout is therefore an excellent sport and hobby for the average man. Trout streams are always found in ideal outing spots. The streams which trout inhabit are brooks or small rivers. The banks are usually flanked with trees and shrubs, often arching over the stream and forming a fragrant verdant roof. Sometimes the river ambles lazily along, only to arrive at a narrow defile blocked with rocks, boulders and tree trunks, through which it rushes turbulently, again to become a placid stream where the banks widen. Here and there we find a deep, silent, transparent pool, in which can be seen wily veteran trout of large size. It takes an angler of experience and ingenuity to entice these old grandfather trout to rise for an artificial fly.

SPECKLED TROUT

In the eastern part of the United States, the speckled brook trout abound. "Salvelinus Fontinalis," the professors call them. Samuel G. Camp says: "No one, seeing a freshly caught brook trout, would say it was other than a thing of beauty. Its delicate, varicolored resplendency is not equaled by any other living thing. . . . While the eastern brook trout is undoubtedly the most beautiful in coloration of all game fishes, in formation, especially as regards very large trout of, say, three pounds or over, its position is not clearly first. The male trout of this weight, however, finely marked with various tints of blue, crimson and gold, tends dangerously to aldermanic girth and, with his usual undershot and cruel lower jaw, is rather a creature to respect for gameness and fighting blood, than to admire artistically."

The color of a brook trout is dependent largely on his habitat. In dark waters, he is found to be dark colored, sometimes almost black. In clear streams running over light-colored pebbles and where the water is not shaded by trees and vegetation, the trout are of light tint and often have a beautiful golden sheen. This variation in the one species of fish is, of course, due to the protective coloring of nature so often found in fish, birds and animals.

In western streams are to be found the Rainbow Trout, "Salmo irideus," as well as the Steel-

heads and Cut-throats. The trout of which so much has been written in English books is the Brown Trout. This species is not native to America, but is found now in some streams on this continent, having been transplanted from England.

SPAWNING

Trout usually spawn in October or November, depending on the temperature of the stream. At spawning time they are found in the headwaters of their native rivers, and up in the little "feeder" brooks. The female constructs a nest by brushing away the sand and gravel with her nose and tail, forming a shallow depression in the stream bed. Here she deposits her eggs. The male trout at this time is at his best in regard to appearance, being highly and brilliantly colored. He is in constant attendance until the spawning is completed, after which time, unlike many fish, both he and she abandon the nest, giving it no further attention. Only about five per cent. of the eggs hatch. Incubation occurs in from sixty to ninety days after spawning. Naturally, feeding conditions have much to do with the rate at which trout thrive. Their principal food is insects.

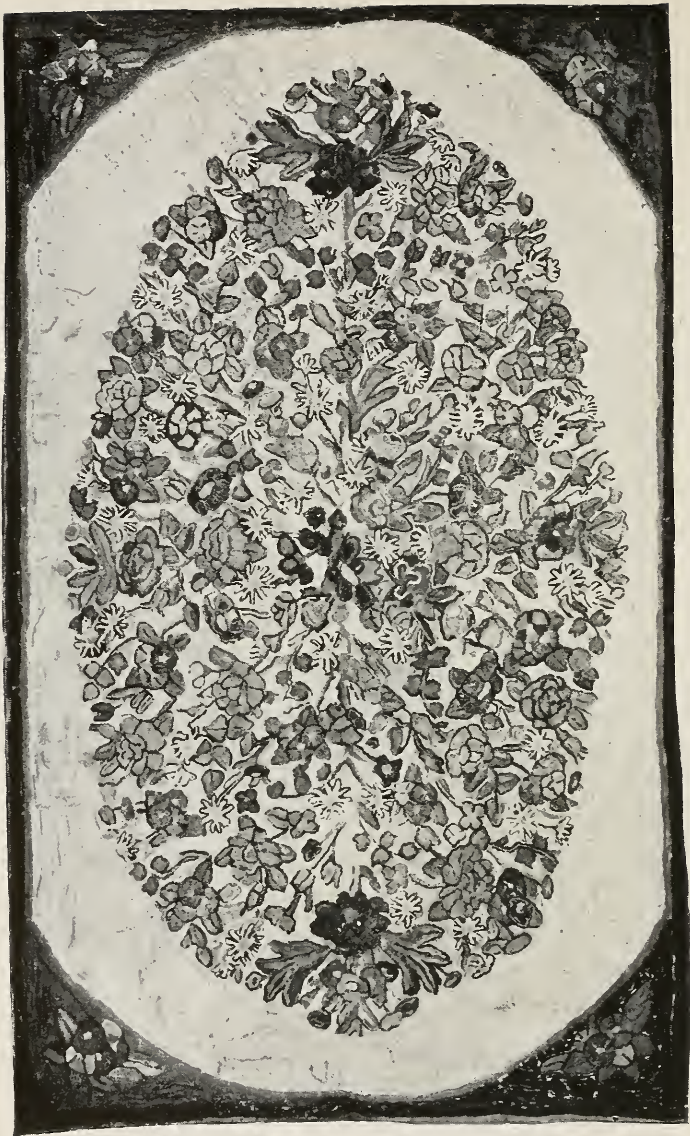
TACKLE

One of the pitfalls of the would-be angler is the tackle emporium, unless it is under the man-

agement of a sympathetic and non-grasping proprietor. There is so much to be bought, and comparatively little that is required. Of the requirements, first in importance is the fly-rod, which should be of split bamboo, advice from the dealer to purchase lancewood, greenheart, bethabara or steel, notwithstanding. Nothing but a good or preferably the best split-bamboo rod will suffice. So much depends upon the suppleness, balance and strength of the fly-rod. All of the tackle should be of good quality. A broken hook, or a rotten line, responsible for the loss of a fish, is indeed wormwood in the angler's cup of joy. Good tackle gives the angler confidence, a most valuable fishing asset.

THE ROD

The split-bamboo rod is made from triangular strips, split from the natural cane. Six or eight such strips are cemented and bound together. The six-strip fly-rod is the better for trout fishing. A ten-foot rod is best suited for general conditions, altho if the fishing is to be confined to narrow brooks, hedged in by thick brush, a shorter rod is advantageous. For the wider streams, where free and easy casting conditions are to be met with, a longer rod will be found convenient. The metal parts of the rod should be of German silver. This is more convenient than nickeled brass, there being less danger of corrosion. A solid cork hand-grasp is to be pre-



HOOKED RUG, 7X11, BY DOROTHEA LITZINGER

ferred to a hand-grasp of wood, merely sheathed with cork. The guides of the rod should be the "English Snake Guides" and made of steel. The rod should be well balanced, bending equally from hand-grasp to tip. Flexibility is much to be desired, but the angler is cautioned against a rod that is too willowy, for it is neither a good caster nor a rod with which it is easy to play a fish. The reel should be of the single-action type, capable of holding one hundred yards of line. Twenty-five yards of line on this reel is generally sufficient. The line should be of water-proof enameled silk, size F for the nine-foot rod and size E for the ten-foot rod.

FLIES

Much can be said about flies. Be it remembered, however, that the theory of fly-fishing is to fool the fish into rising to the artificial fly, in the belief that it is a natural fly. It can, therefore, be readily understood that the type of artificial fly used is governed largely by local, natural conditions. The artificial fly should be as close an imitation of the flies of the place, season and time of day, as possible. Some general rules, the result of experience covering hundreds of years, have been laid down. Camp says: "Quite naturally, two of the most important items in a fly-fishing outfit are the fly-book and its contents. To select intelligently the flies upon which your success or non-success will very

greatly depend, it is necessary to take into consideration a number of facts that are known to be generally applicable. As a rule, avoid brilliant flies; flies of subdued coloration, except in wilderness streams where the trout will take anything, are practically the only successful ones. Upon very dark days, or when the water is slightly flooded and discolored, they should be lighter in color and somewhat larger than those used when both weather and water are clear.

"Flies of numbers eight, ten and twelve, are generally the best, number eight being the most universally effective, although late in the season, or at any time when the stream is very low and clear, number ten and twelve and occasionally even smaller are to be preferred. Personally, I would be satisfied with the following trout flies in good quantity and range of sizes: coachman, grizzly king, cowdung, Cahill, Beaverkill, queen of the water, brown hackle, Montreal, and March brown."

LEADERS, CREEL, ETC.

In addition to the tackle already mentioned, the fly-fisher requires leaders, leader box, creel, waders and landing net. The leader should not exceed six feet in length for trout fishing. Fly-fishing leaders are usually made of gut, which when dry is stiff and brittle. A dry leader should never be used, and for this reason, leader boxes are designed to keep them constantly moist be-

tween two damp felt pads so that they are always in a condition to be used. It is recommended to the beginner not to fish with more than two flies, for which purpose a five-foot leader, size "medium trout," will suffice. For three flies, a six-foot leader is advisable.

A creel, which is a basket slung by means of a strap over the shoulder, is required to receive the fish after they have been caught. For wading in the streams, hip boots or regular wading shoes are necessary. The essential paraphernalia is completed with a small landing net.

TROUT STREAMS

Most books on angling give advice on what part of the stream to look for trout. This advice is theoretically good, but the writer has found that it is advisable when fishing in unfamiliar territory, to secure information as to the habits of the trout in that particular stream. General rules for trout fishing in a stream in the lowlands seldom hold good, for instance, in the high sierra. In the first place, the relative seasons are different, depending on the latitude of the stream and its altitude. The way then to get your bearings as to the best method of "whipping" the river, is to ask the local anglers. In most streams, the larger trout will be found sulking in the clear deep pools. Often, a fly cast, however skilfully, in such a pool, fails to get a rise from the fish, particularly in the middle of the day. Early

in the morning or in the evening the same fish may quickly rise to the fly.

FLY CASTING

In fly casting, the reel should always be underneath the rod, the handle of the reel being to the right. The rod should be grasped in the right hand, the thumb being extended upward along the cork hand-grasp. The casting should be done almost entirely with the wrist. This applies to the back cast, as well as the forward cast. Many beginners fail to master the art of casting because they insist on delivering the line with a sweeping motion of the arm instead of relying on a snappy wrist motion and the natural spring of the rod. The back cast should be accomplished with a strong backward wrist motion, and the forward cast commenced just before the line has straightened out behind. The line should, under no circumstances, be allowed to fall into the water on the back cast. When a fish rises to the fly, it should be immediately struck with a quick backward motion of the wrist. It is better to be too quick in doing this than too late, for if the fish feels the prick of the hook without being caught, he will leave the fly at once and will fail to rise again. If, however, you strike too quickly, the result will be that the fish rises short and misses the fly altogether, and he will be likely to rise again on the next cast. When the trout is hooked, he

should be carefully played and not forced. Particular care should be taken to keep him away from submerged tree branches, rocks or anything that might entangle the line. Rather force the fish to the landing net and run the risk of losing him that way, than surely lose both fish and your line in a tangle among submerged obstructions.

Trout can be caught with bait, such as grasshoppers or worms, but except in the early Spring, when trout will not readily take the fly, such method of trout fishing is not considered good sport.

BLACK BASS

Black bass, in the writer's estimation, is one of the best of fresh-water fish for which to angle, particularly the small-mouth bass. There is no gamer fish in proportion to weight than this favorite American fresh-water fish. Black bass are caught in lakes as well as rivers. They can be caught with the fly as well as with live and artificial bait. The bait or artificial bait can be fished by casting, trolling or still ("plug") fishing. Here again we must yield to the fishing characteristics of the particular lake or stream. Generally speaking, the best bass fishing is in the latter part of June or the early autumn. The writer has made record scores, however, in August which is usually the poorest time for catching bass.

Bass are a peculiar fish and as temperamental

as a prima donna. To-day they will strike at any bait, to-morrow at worms only, the next day a minnow is their pleasure, and perhaps on the following day a nice green frog will be necessary to entice them. The wise fisherman provides himself with several of the types of bait that the fish are known to strike in the particular water in which he is fishing.

The writer has had much sport "plug" fishing for small-mouth bass in Maine. Many anglers affect a dislike for plug fishing, but we find the contrast between quietly sitting in a boat with slack line and no effort, and the sudden vigorous activity following a strike, most exciting and enjoyable.

Imagine yourself patiently and comfortably seated in a boat, rod in hand, with fifty feet of line out, on the end of which is a hook baited with a minnow. All is quiet except the "dup-dup-dip-dip" of the ripples against the side of the boat. You are holding the rod in your right hand. In your left hand you are holding on to the slack of your line which you have pulled from between the reel and the first guide. Your attention is upon that bit of slack line which will be the first indication of a strike. Suddenly the line shoots from your grasp and you find yourself frantically paying out line to the fish which is so rapidly running away with your bait. The length of time you let him run depends on the size of your bait and how long,

according to your experience, you believe it will take him to gorge it.

At the proper time, you press your right thumb on the drum of your reel and allow the fish to straighten the slack line. At the first feeling of pressure, you pull your rod back sharply, thereby hooking the fish. Then the

Old woodcut from the Book of St. Albans, printed in 1486 by Wynkyn de Worde with Caxton's letter.

Reproduced from the second Bagster edition of "The Complete Angler" in the possession of Charles W. Taussig.

sport commences. You reel in a few yards of line, after which you find that the fish is seriously interfering with this process. Knowing by experience that the bass will get the better of you if you try to force him at this stage of the fight, you let go the reel, using your thumb as a drag. Out whizzes the line, as the bass dashes toward the other side of the lake. The

moment you feel the least slacking, you begin to reel up. Slack line at this time usually means a lost fish. This process of reeling in and then letting the fish run out is repeated, each time bringing the fish closer to the boat. Often after a long fight, when the fish appears played out, he will resume activity upon being brought toward the landing net, when it is necessary to let him run again. It is not unusual at times to play a two or three-pound bass for ten minutes, before you can safely net him.

SALMON

When Izaak Walton wrote "The Compleat Angler" in 1653, and long before, the salmon was held in the greatest esteem by anglers. Walton writes: "The Salmon is accounted the king of fresh-water fish, and is ever bred in rivers relating to the sea, yet so high, or far from it, as admits no tincture of salt or brackishness. He is said to breed or cast his spawn, in most rivers, in the month of August: some say, that then they dig a hole or grave in a safe place in the gravel, and there place their eggs or spawn, after the melter has done his natural office, and then hide it most cunningly, and cover it over with gravel and stones; and then leave it to their Creator's protection * * * to become Samlets early in the spring next following.

"The Salmons having spent their appointed time, and done this natural duty in the fresh waters, they then haste to the sea before winter,

both the melter and spawner; but if they be stopt by flood-gates or weirs, or lost in the fresh waters, then those so left behind by degrees grow sick and lean, and unseasonable. * * * But if the old Salmon gets to the sea, he recovers his strength and comes next summer to the same river, if it be possible, to enjoy the former pleasures that there possest him; for, as one has wittily observed, he has, like some persons of honour and riches which have both their winter and summer-houses, the fresh rivers for summer and the salt water for winter, to spend his life in; which is not, as Sir Francis Bacon hath observed in his 'History of Life and Death,' above ten years. And it is to be observed, that though the Salmon does grow big in the sea, yet he grows not fat but in fresh rivers; and it is observed that the further they get from the sea, they be both the fatter and better."

A sight never to be forgotten is when the salmon meeting an obstruction such as a waterfall, on their way from the sea to their fresh water breeding place, leap over it. No better description of this is to be found anywhere than in the poem of Michael Drayton, a contemporary of Walton:

"As when the Salmon seeks a fresher stream to find;
(Which hither from the sea comes, yearly by his kind,)
As he towards seasons grow; and stems the watery tract
Where Tivy, falling down, makes an high cataract,

Forc'd by the rising rocks that there her course oppose,
As tho' within her bounds they meant her to enclose;
Here, when the laboring fish does at the foot arrive,
And finds that by his strength he does but vainly strive;
His tail takes in his mouth, and, bending like a bow
That's to full compass drawn, aloft himself doth throw,
Then springing at his height, as doth a little wand
That bended end to end, and started from man's hand,
Far off itself doth cast; so does the Salmon vault:
And if, at first, he fail, his second somersault
He instantly essays, and, from his nimble ring
Still yerking, never leaves until himself he fling
Above the opposing stream."

Salmon are only found in the northern hemisphere between the latitudes of 42 degrees and 75 degrees. Within these latitudes there are many salmon rivers both in North America and in Europe. The best salmon fishing in America is to be found in the maritime provinces of Canada and in Newfoundland, Washington, Oregon and British Columbia, as well as Alaska. Abroad, Scotland and Norway abound in salmon rivers.

The writer enjoys mixing a little fishing with his rather extensive business trips. During a trip to Norway he was fortunate enough to include some salmon fishing. The following notes

made on that occasion show, to some extent, tne pleasures that travel affords an angler, and the pleasures that angling affords a traveler.

SALMON FISHING IN NORWAY

Trondhjem, Norway, is a somewhat surprising city. Nestling as it does almost at the edge of the Arctic Circle, one would hardly expect to find as beautiful and lively a town as this. A fine hotel, beautiful restaurant, good music and dancing until two in the morning. During the day, all is hustle and bustle; business men always in a hurry; everything full of pep and snap. But why not? The sooner business is out of the way, the quicker they can get off to their salmon streams. They eat salmon three times a day, think of them all day long and fish for them all night long. They must get their sleep during the long winter nights when there is no fishing. The spirit of it is bound to get you in time, and before long you are anxious to try your luck at catching the "King of Fish." We regretted exceedingly that we could not accept an invitation to go fishing on one of the privately owned streams about twenty-five miles northeast of Trondhjem, particularly when our friend, who had invited us, showed us his record for the past two weeks. He had an average of three salmon per day, averaging in weight over twenty pounds each, including a number of fish weighing over forty pounds. He told us that it was an excep-

tionally good year for salmon and that his record was not unusual for the present season. Declining his kind invitation did not mean that we had abandoned the idea of salmon fishing. It was necessary for me to go to Christiansund and I figured that we could spend a few days fishing after leaving there. This would include the Fourth of July, at which time we thought it would be nice to take a short vacation.

ALONG THE NORWEGIAN COAST

We left Trondhjem in a small boat, on a bright summer's day, and sailed through Trondhjem's Fjord and Trondhjem's Leden, a day's journey to the quaint fishing town of Christiansund. Christiansund is one of the most important fishing centers of Norway. Built on three small islands, it presents a most unusual and picturesque aspect. The three islands are situated at the points of an equilateral triangle, about a half mile from one another. Business flourishes on all of the islands; consequently, the intervening water is a "Rialto" or principal business square, swarming during the day with small boats of all imaginable varieties. On an island near the town the principal industry of drying klipfish is carried on. This island, Skorpen by name, is snow-white with mounds of drying fish spread out all over the rocks. When the wind hails from the direction of Skorpen it carries along with it a redolence that by comparison makes the Chicago stockyards a parfumerie.

We left Christiansund for Molde, traveling part of the way by boat, and part of the way by automobile. We stayed over night at Molde, and in the afternoon of the following day left by steamer for Aandalsnaes on Romsdalfjord. It was here that we intended to spend our holiday.

AANDALSNAES

At Aandalsnaes we found an exceedingly comfortable hotel, situated near the junction of the Rauma Elv (Rauma River) and Romsdalfjord. It was an ideal headquarters for fishing or hiking. We decided first to hike a bit and learn the lay of the land. A short walk took us to a promontory overlooking Romsdalfjord. Many travelers believe the Norwegian fjords to be the most beautiful of all European scenery, and of all Norwegian fjords, Romsdal is surely the most magnificent. It is a wild, wooded, deep valley, filled with water, the trees growing from the water's edge, where they cling to the almost bare rocks, all the way up the precipitous mountainside to the sky, in back of which tower the snow-capped mountains.

A day of idling here and there, near the fjord and along the banks of the Rauma, whetted our appetites for salmon fishing. The Rauma is considered the best river for salmon in this part of Norway. True, much of the river is leased to English sportsmen, but there is a long reach be-

tween the mouth and the first leased reach, where one is permitted to fish. Not only are salmon plentiful in the Rauma, but they run fairly large. It is a general rule in Norway that the farther north, the larger the salmon.

THE NORWEGIAN GUIDE

That evening I sent for a guide and had a talk with him. He was an old fellow, but sturdy and strong and had a smile half concealed in his wrinkly, weatherbeaten face that promised well for his humor and affability. His English was faultless, learned through forty years' contact with English anglers. Together we went to a little shop in the village, where he picked out for me suitable tackle for the morrow. A long and rather heavy rod, a substantial line and a number of flies, among them the Jock Scott, Silver Doctor, Durham Ranger and Dusty Miller, also several types of spoons and other necessary accessories.

The majority of Norwegian streams are wondrous, translucent volumes of water, flowing through verdant valleys, a mile or more in width, and flanked by forest-clad mountains. These large rivers are not suitable for fly-casting, since such breadths cannot be covered by this means. Consequently, harling is resorted to. This is, in substance, what Erik, the guide, told me upon my questioning him as to the "why" of purchas-

ing spoons. Harling is similar to trolling, only it requires much more skill. Harling a swift salmon river, as we were soon to learn, was quite different from trolling on a placid, currentless lake.

NO LUCK

The following evening, about eight o'clock, we set out. We hiked a short distance up the river along the bank, and there took to a flat-bottom rowboat. Erik rowed and we sat in the stern. It was our intention first to try fly-fishing, and accordingly explored the deep, swirling pools on both sides of the river for hours, without the least encouragement. Then, as is customary the world over, the guide explained that it was too late in the season, the river was too clear, that the "cock" salmon were farther up the river, and that the "hen" salmon were uncertain. Didn't we see and hear the trout breaking water? Surely we should know that this is a sign that the salmon have gone, etc., etc. Somewhat dismayed, but still hopeful, we changed our flies to spoons and tried harling. We met with no better success, altho I had a trout strike, which prompted me to use a small spoon and see if I could secure a few of these smaller fish. My wife, with the tenacity of her sex, refused to fish for anything but salmon. I soon had three shining, two-pound trout aboard and felt somewhat better.

The next evening we tried again, but with no better success. The third evening, which was to be our last, Erik decided to take us up the river as far as the first leased reach. In order to do this, it would be necessary for us to stay out well past midnight, but with sunset close on to eleven P. M., and sunrise about one thirty A. M., this was no hardship. By this time we had given up the thought of fly-fishing altogether, and had become devotees to harling. It taxed Erik's strength to the utmost to row against the current of the river, but he accomplished his task without complaint and we gradually approached the narrower parts, four or five miles above the mouth. Here we were almost completely surrounded by snow-topped mountain peaks, at the foot of which nestled tiny thatch-roofed houses. At times, approaching close to one of these houses, we would note that curious sight to be seen throughout rural Norway, trees growing out of the thatched roofs. Some of these huts had a veritable garden of wild flowers on the roofs. Seeds borne on the winds take root and cause this odd, yet picturesque sight.

The night was mild and quiet. Nothing could be heard but the dip of the oars and the rush of the waters, excepting now and then the splash of a trout breaking water, and at longer intervals, a loud splash of a much-coveted salmon. The mountain tops were aglow with pink, rose

SEVRES FIGURINE FROM MR. MEYER'S COLLECTION.

and violet lights, first from the setting sun and then from the approaching dawn, which so closely followed the sunset that there was no intervening darkness. Airy, delicately-tinted clouds floated lazily over the deep dark valleys between the jagged mountain tops.

OUR FIRST SALMON

It was in such a setting that we caught our first salmon. I was contemplating the beauties of our surroundings, when I was aroused by a joyous, tho startled feminine cry, followed by the ZIP, WHIR-R-R-R! of a reel on a rampage. Erik was no longer the quiet, good-natured guide. He was a commander now and issued his orders with a sharp, incisive accent that meant business.

"Reel in your line!" he ordered, turning to me. It was already half in.

"Give him plenty of line!" was the order to my wife.

Whir-r-r-r! went the reel, as yard after yard of line went spinning out. "Strike!" he shouted, and the lady obeyed. His Majesty, the King of Fish, was hooked! Then started a battle royal! Here, there, all about the boat, the fish carried the line.

"Keep your rod down!" admonished Erik, as my wife, in her excusable excitement, forgot that inexorable maxim of successful angling.

Now the salmon started to run up on the line, a frequently successful maneuver on the part of

the fish. Slack line showed and anxiety prevailed in our boat. Then the fish sulked and we were sure he was gone. Turn after turn of line was reeled in, and no tautness to indicate the fish was still there. Enthusiasm gave way to chagrin. But no! A sudden dart of the fish, and the line was humming again. His Majesty was done with sulking and was fighting hard for his life. Rushing in mad and reckless fury all over the river, he put up a brave fight. Now and then he would break water, showing us his beautiful silvered body gleaming in the dim light like a jewel on dark velvet.

In about thirty minutes he showed signs of tiring. My wife would frequently bring him close to the boat, but before Erik could net him, he would be away again like a flash. It took forty-five minutes, all told, to land him.

Towards morning, I caught another and my wife lost one after playing him for about ten minutes.

We did not start back for the hotel until the sun peeped up over the mountain tops. It had been a glorious night, and we only regretted that it was our last opportunity for such fishing for the balance of our trip.

SALT WATER FISHING

The sea affords much pleasure to the angler. Many of the fish cannot be termed game fish, but even such sluggish fish as the cod, blackfish,

haddock and halibut are sought by fishermen for pleasure. There are, however, many game fish that will give the angler a good fight and much sport. Among the smaller game fish are the bluefish and the weakfish, much sought after along the Atlantic coast from Cape Cod to Florida. Of the big game fish, there are the tarpon, marlin, swordfish, giant bass, sailfish, bonefish, tuna, jewfish, yellowtail, barracuda and several others. Florida and southern California are the two points where big game fishing is principally pursued in the United States, altho the bass is fished for all along the Atlantic coast, usually by surf fishing. Surf fishing has recently become an extremely popular sport. The fisherman stands on the beach in hip boots and casts his line out beyond the breakers. Strength and skill are required for this type of fishing, but it is indeed good sport.

TUNA

The tuna, or tunny fish as it is also known, belongs to the same family as does the mackerel, but attains enormous size. Tuna have been caught that measured ten feet in length and weighed one thousand pounds. Catalina Island, California, is where much of the tuna fishing is done. The method of fishing for tuna is usually trolling from a motorboat. Flying fish is used for bait. The tuna follows the bait, striking at the head. The moment the tuna feels the hook,

he is off at a terrific pace and will often take out six or seven hundred feet of line before he can be stopped. From then on, it is a fight between fish and man, and at times it takes two to three hours before the fish is brought to gaff. The tackle for tuna fishing is generally a sixteen-ounce rod, five feet long and about 1,200 feet or more of 24 thread line. The leader is made of strong piano wire. Two six-foot wires are strung from the hook to a one-inch ring and two wires of the same length join this ring to another one, onto which the line is bent. The rings are for the glove-handed boatman to hold when he gaffs the fish.

SWORDFISH

Another big game fish is the swordfish, which attains immense size, the average weight being 360 pounds, but individual fish often run over twice that weight. In the Atlantic Ocean, off New England, swordfishing with harpoons is a considerable industry. At Catalina, it is fished for with tuna tackle as a sport. Frank Gray Griswold in his book "Some Fish and Some Fishing," gives an interesting description of his first attempt at swordfishing:

"I looked over my shoulder and saw the dorsal fin of a large fish moving slowly near by and his tail, which was partly above the surface, seemed to be at least six feet from the dorsal fin. He was moving through the water, leaving no wake behind him such as a shark does, and making no use of his tail; this

he is enabled to do, owing to the great power of his pectoral fins.

"The launch was slowed down. I had a flying-fish on the hook and let out 150 feet of line. The boatman now tried to maneuver the boat in such a manner that the bait would swing in front of and near the fish. This was difficult, as the swordfish was turning the same way we were, seeming unwilling to cross our wake.

"At last he saw the bait and as the fish sank, the launch was stopped. He disappeared without a motion or the least flirt of the tail. The balance of this fish is perfection. The line was jarred as the fish struck the bait a hard blow and then it began to run out slowly. I gave him about two hundred feet and when the line became taut, struck hard.

"I had hooked my first swordfish!

"He made a run of about two hundred yards and then sounded about six hundred feet, stayed down a few moments and allowed himself to be pumped up. He then came up to the surface and thrashed about in a circle, sounded again, was pumped up again. He did this several times. Within the first hour, I had the double line, which was doubled back fifteen feet, on the reel three times and the wire leader was above the surface. We could see the fish plainly and 'Shorty' said he would weigh over five hundred pounds, but fish always look big under those circumstances and I was too busy to estimate weights. One thing I discovered: he was too heavy for me, for in some of his plunges he had nearly pulled me overboard.

"I fought the fish for all I was worth for four hours and twenty minutes, then brought him to the boat on his side. I had most of the double line on

the reel and four feet of the leader out of the water. I called to 'Shorty' to put the gaff into him. Just then the fish gave a last struggle and went under the boat and the line fouled on the upper end of the shoe that protects the propeller. The fish, still on his side, was under the boat in plain view, but beyond the reach of the gaff and held by the fouled line.

"I slacked my line to see if the boatman could clear it with the gaff. The bag of the slack line drifted under the boat. 'Shorty' caught it with the gaff and cut it with his knife, then cut the line on the rod side of the boat, knotted the two ends, and told me to reel in. I reeled in twenty-five feet or so of loose line and found he had cut the wrong end and had thrown the fish end overboard.

"I thought much but said nothing!

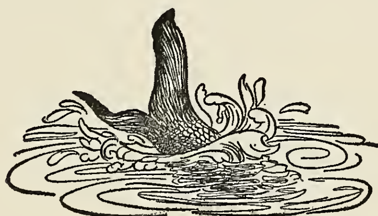
"I put my rod down with relief mingled with disgust, and looked over the side of the boat at the swordfish. He slowly revived a little, struggled, pulled the end of the line free, and sank."

It's all in the game of angling, these victories and defeats, and is what makes fishing such a thrilling sport. There is another attraction to angling, which we have not mentioned, and that is the comradeship that it engenders. Some of the real delights of friendship are unknown until they have been experienced and enjoyed on a fishing trip.

HOOVER ON ANGLING

Secretary of Commerce Herbert Hoover said in a recent address before the Izaak Walton

League of America that this country needs more anglers, for angling produces the type of character that makes for good citizenship. "A fisherman must be of contemplative mind, for it is often a long time between bites. These interludes produce patience, reserve and calm reflection, for no one can catch fish in excitement, in eagerness or in malice. He is by nature possessed of faith, hope and even optimism or he would not fish; for we are always going to have better luck in a few minutes or to-morrow."



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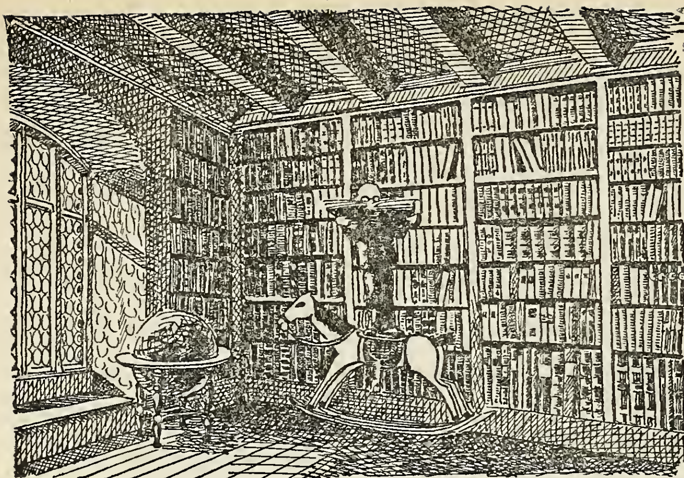

Book Collecting

> "... the pleasures of the mind,
> Bear us from book to book, from page to page,
> The winter nights grow cheerful; keen delight
> Warms every limb; and ah! when we unroll
> Some old and precious parchment, at the sight
> All Heaven itself descends upon the soul."
>
> *Goethe.*

NO man is poor who possesses a good book. No man can be lonely in a library. No man's lot is unbearable, no matter what his affliction, if he possesses one or more of the necessary faculties for absorbing the contents of a book. We recall most vividly an incident which impressed these truths on our mind.

An acquaintance invited us to his home for

dinner. When dinner was announced we were informed that his son who was a cripple would greet us in the dining room. He was strapped in a specially built chair, in which he practically lived. He had to be fed, for he could not raise his hands. This had been his condition from birth. Attached to his chair was an easel, capable of supporting a book, the leaves of which, by God's grace, he was capable of turning with a slight, labored movement of his fingers.

It was difficult for us at first to understand his speech, so badly was it distorted by his unfortunate condition. Gradually, however, we became accustomed to it. We were amazed at the mentality housed in this frightfully inadequate body. Gradually, as his conversation waxed warmer, the physical portion of him receded from our minds, as we found ourselves walking with the elect of the world, conjured up by the remarkable mind of this cripple. His reading had been wide and well chosen. His literary companions had been taken from all ages and all parts of the world. Paradoxical though it may seem, the special subjects that this man, doomed to live in a chair for life, had chosen, were the works of Balzac, which he had read in their entirety, and Napoleonana. His appreciation of Napoleon was phenomenal. He had studied in detail every campaign of the great general and was himself a master of military strategy. The time of our visit was during the Great War, and this man, so very,

very far behind the battle lines, was engaged in plotting and planning strategic and tactical maneuvers, which, though they were never communicated beyond his immediate family, were in almost all instances carried out to the minutest details by the generals at the front. And so this active, competent mind would emerge from the inactive, useless body, through the hypnotic media of books, and engage in the world's greatest romances and the world's greatest war. Truly, as Emerson said, "The theory of books is noble."

After perusing several charming books of recent publication on the subject of book collecting, we are tempted to eschew what appears to be the orthodox method of arousing the reader's interest in bibliophilism, viz., "The 'Vicar' is not a scarce book. For from six to eight hundred dollars, dependent upon condition, one could, I think, lay his hands on as many as ten copies in as many weeks. It is what the trade calls a bread-and-butter book—a staple."[1]

We do not criticize those who speak lightly of paying "six or eight hundred dollars" for a book (we envy them), but believe the lighter side, financially speaking, of book collecting, is important to the many who cannot indulge in expensive hobbies.

The fondness for books is growing rapidly. It manifests itself in many ways: the ability of the market to absorb the increasing number of new

[1] "The Amenities of Book Collecting," A. Edward Newton.

books, the enhancement in value of modern first editions, and the larger and more popular attendance at book auctions, all indicate a waxing interest in books and book collecting. The appeals of book collecting are many-sided. Book collectors commence their gathering with different objectives: rarities, first editions of a general character, first editions of particular authors, various editions of particular books or groups of books, collections of certain early printers, such as, Caxton, the first English printer, and others. For the average man, the policy of purchasing books in which he is interested for reading purposes, as well as collecting, is advisable. It is not within the means of most men to acquire a general collection of books, nor to indulge in rarities or even books that are in general demand by collectors. He must, if he is of limited means, collect books that are in no great demand, but which have an intrinsic or sentimental value. This applies to collecting almost anything.

FAD OR FANCY

Not so long ago, we were browsing around the shop of a prominent print-seller on Fifth Avenue. The specialty of this house was Americana, that is, relics and prints dealing with the early history of the United States. An atrocious hand-colored lithograph caught our eye. It was a memorial to George Washington, published in 1800 immediately after the first President's

death. The sentiment was there, but the art was missing. It was in truth a horrible daub. Neatly attached to the crude frame, on the reverse side, was the price label, which informed us that we might become the possessor of this rarity for $250. Needless to say—but why say it!

A few evenings later, we attended a book auction at the Anderson Galleries. There we purchased for $3.50, a book catalogued as follows: "WASHINGTON (GEORGE). Memory of Washington: Comprising a Sketch of his Life and Character; and the National Testimonials of Respect. Also, A Collection of Eulogies and Orations. With a Copious Appendix. 12mo, contemporary calf (foxed, lacks portrait). Newport: Oliver Farnsworth, 1800. First Edition. Scarce." Now, there was no comparison in intrinsic or interest value between these two relics, but the print was of a type now being widely collected and the book was in no great demand at the moment. The book is a source of constant pleasure both to read and for its age and significance. The picture had both age and sentimental significance, but it could not be viewed without a shudder.

NOT NECESSARILY A RICH MAN'S HOBBY

Many book-lovers are discouraged from collecting books, believing that it is a rich man's hobby, In its broadest sense, book collecting is capable of being almost a universal hobby. Any-

one who possesses even a small, unimportant library, can, if he has the collector's spirit, become a collector and find new pleasures in what may be a comparatively insignificant library.

The theory of collecting is "to rescue good books from perishing." The field of the wealthy collector is to gather and preserve books of known rarity and value. But it is equally important that someone with bookish discernment prevent current good books from perishing and this does not require wealth. Strange as it may seem, the book of to-day that is published in large editions may be the rarity of to-morrow, for it has been more or less a rule that books increase in indirect proportion to the number originally published. On second thought, this is not strange, for everyone is tempted to preserve that which is already scarce and to ignore that which for a moment is plentiful. And so the collector of short purse and long head can amass a worthwhile collection of books as well as his financial betters. There is sport in collecting books with a meager purse. It develops in the hobbyist real bookish judgment.

Most books on book collecting deal with the spectacular collectors, those who, having considerable wealth, have, in the face of much competition, amassed a valuable collection of books. Little is said of the small book hobbyist who quietly and inexpensively gathers within the confines of a small cabinet a unique and interesting group of books.

ONE PLAN FOR COLLECTING

One of the most interesting plans of book collecting is to gather all the important books relating to some phase of one's business. We know of one collector who is in the food products business, and has completed a most valuable collection of books on cookery. Far back into history she has gone to find many interesting accounts of how the palates of kings, queens, cardinals and common people have been tickled. Often, in delving into the past along certain lines in which one is interested, some facts long forgotten are unearthed, which prove of inestimable value in one's business or profession, and besides, bring the satisfaction of re-discovery, which ranks only second to that of discovery.

"LONG-FORGOTTEN LORE"

We recall a bookish man, who, poring over old tomes, came across reference to the fact that Alexander the Great was embalmed with honey. During the war, when all the available glycerine, which is one of the principal constituents in the process of embalming, was being utilized in the manufacture of nitroglycerine and other explosives, he conceived the idea of using artificial honey made from sugar, for embalming purposes, in place of glycerine. This was accomplished and released for war-winning purposes a large amount of glycerine.

COLLECTING TO READ

It is not necessary for the small book collector to gather books he does not care to read. Rather let his collection reflect his personality. Of course, the large collector cannot possibly read all of the many volumes he brings together, but such a collection has a much more impersonal mission than the small collection.

It is true that a book collector who is investing hundreds of thousands in a library, must perforce be somewhat orthodox in his selection of books. The magnitude of his enterprise necessitates the tempering of his whims, keeping in mind, of course, permanency of value. We, however, are writing for the man who perhaps is limited to less than one hundred dollars a year to be spent on books. His guide should be his fancy. His fancy, however, will be guided by taste and judgment, if he becomes more or less familiar with books and their history.

Roger de Coverley wrote disparagingly of the lady's library that consisted principally of false backs of books. We are sure that the shade of old Roger was standing by us the other day when we were in a bookshop and saw a lady make a purchase of seven hundred volumes, the only specification being that the covers must be gray.

Beware the de luxe edition, arrayed in imitation morocco! They fool no one but the purchaser. Substantial, cloth-covered books will suffice the collector with modest means, and if

the paper and type are good, the books can be rebound at some later date, to suit the fancy and the pocketbook.

Before going further into the realm of book collecting, it is well to outline the history of books, and explain some of the terms to be met with in collecting.

The earliest Egyptian book known is "The Book of the Dead," a copy of which is in the British Museum. G. H. Putnam describes it as "consisting of invocations to the deities, psalms, prayers, and the descriptions of experiences that awaited the spirit of the departed in the world to come, experiences that included exhaustive analysis of his past life and his final judgment for his life hereafter." In order to provide safe conduct for the soul on its journey to the other world, a copy of "The Book of the Dead" was always placed in the tomb.

The largest library before the advent of printing was at Alexandria. It was founded by Ptolemy Soter about 283 B. C., and increased by his successors until it contained, according to Seneca, 400,000 volumes. During the siege of Alexandria by Julius Cæsar in 48 B. C., a great part of this library was burnt. It was soon re-established and augmented by the addition of the library founded by Eumenes, King of Pergamus (the accredited inventor of parchment), which collection, amounting to 200,000 volumes, Marc Antony presented to Cleopatra. In the library at Alexandria, according to Drinkwater,

were to be found such books as the Odyssey, the Iliad, Plato's Republic, the writings of Xenophon and Herodotus, the plays of Euripides, Sophocles, Æschylus and Aristophanes, Euclid's Geometry, and many other books on mathematics and science, which have been entirely lost.[2]

Alexandria flourished as one of the chief seats of literature until it was taken by the Arabs 640 A. D., when the library was burned by the order of Caliph Omar, who reasoned thus: "If these writings of the Greeks agree with the Book of God they are useless and need not be preserved; if they disagree, they are pernicious and ought to be destroyed." Accordingly, it is said, they were employed to heat the 4000 baths of the city, and such were their number that six months were barely sufficient for the consumption of the precious fuel.

In the time of Augustus, the first Roman Emperor (63 B. C.-14 A. D.) books, still in the form of rolls or scrolls, were abundant and surprisingly low-priced. Horace informs us that the Sosii were his publishers. He complains of his works getting into the hands of the common people and becoming schoolbooks. In his "Ars Poetica" he writes of a poet "rich in lands, rich in money laid out at interest," proving, of course, that authorship was at one time a lucrative profession. Martial tells us that he is read throughout the whole world, and in all nations under the rule of the Romans; that he is in every-

[2] The Outline of Literature, Vol. I.—John Drinkwater.

body's hand or pocket. He informs us that a copy of his 13th book (14 pages of modern print, 8vo.) may be bought for 4 nummi, which is about 15 cents, and that if the bookseller Tryphon were to sell it for half that sum, he would still get a profit. He also writes that a copy of his first book (29 pages of modern print, 8vo.) polished with pumice stone and encased in purple, may be bought at Atrectus' for five denarii (about 80 cents). The low prices of these books, which, of course, were handwork, were due to the use of slave labor. One reader would dictate to many slaves who transcribed the work.

Both Martial and Horace tell us that the publishers in those days produced at times large editions, which could not always be sold. The "remainders," as modern book publishers call them, were often doomed "to feed bookworms" or "to wrap up pastry and spices." [3]

The period which may be assigned to the general adoption of the square book, first designated as libri quadrati, was probably not earlier than the fourth century A. D. There is a copy of Virgil in the Vatican library, which may be considered one of the oldest existing monuments of a book in this form. It probably belongs to the age of Constantine (272-337 A. D.). It is a relic of Roman handicraft, when the language of Virgil was still the language of Rome, as is shown by the costumes and all the accessories of the illustrations, which were evidently executed

[3] "A Handy Book about Books," John Power (London, 1879).

when Roman dress and manners prevailed in Italy.

MONKS AND MANUSCRIPTS

During the dark ages from the fifth to the fifteenth centuries, books were scarce, and consequently, high in price. The monks were the sole transcribers, and as they worked single-handed in the scriptorium attached to each principal monastery, but few copies could be made. The monks, and sometimes the bishops, were the illuminators and bookbinders, as well as the transcribers. These MSS. were among the most beautiful that were ever produced. Of course, only museums and the wealthiest of book collectors can now afford them.

APOSTLES, SAINTS AND PROPHETS

Andrew Lang says of these MSS.: "It is one of the charms of the MSS. that they illustrate in their minute way, all the art and even the social condition of the period in which they were produced. Apostles, saints and prophets wear the contemporary costume, and Jonah, when thrown to the hungry whale, wears doublet and trunk hose. The ornaments illustrate the architectural taste of the day. The backgrounds change from diapered patterns to landscapes as newer ways of looking at nature penetrated the monasteries."

Saturnus am stern bin ich genant :
Der höchst planet gar wol bekant :
Natürlich bin ich truken vnd kalt :
Mit minem wircken manigualt :
Sorch in ... men hüsern stan :
Dem stainbok dem wasserman :
Den tün ich schaden zü der welt :
Mit wasser vnd mit grosser kelt
Mit erhöhung in der wage ist
Im wider fall ich zü der frist .
Vnd mag die zwelff zaichen
In dreissig jaren erraichen :

REDUCED FACSIMILE OF LEAF FROM BLOCKBOOK "FOLGE DER SEIBEN PLANETEN" OR THE "PLANETENBUCH" (1470-4).

INTRODUCTION OF PAPER

The introduction of paper greatly aided the multiplication of books. Paper was invented by the Chinese about 95 A. D., and was introduced by them to the Arabs in the seventh century. There was a factory established for making paper at Samarkand about 706 A. D. The Arabs seem to have carried the art into Spain and to have there made paper from linen and hemp, as well as from cotton. The invention of printing about 1438 A. D.[4] did away with the occupation of the transcriber, and materially increased the work of the binder.

Prior to 1438 printing was accomplished by means of engraved wooden blocks, and the books printed therefrom were called blockbooks.

INVENTION OF PRINTING

There has been considerable controversy over the actual invention of printing with movable type. A number of presses started almost simultaneously about that time. According to W. M. Ivins, Jr., curator of prints at the Metropolitan Museum of Art, the actual invention of printing with movable type was probably not made by any one man. There are, he tells us, legends about Coster of Haarlem and legal documents relating to Gutenberg at Strassburg and Mainz, as well as records of experiments by Waldfoghel

[4] The Chinese are known to have printed from movable type 300 years prior to this.

at Avignon in 1444. There are, however, no books or pieces of printing in existence that can be definitely proved to have been printed by any of these men. It is probable that Coster printed with moving type before Gutenberg did, and that Gutenberg's invention was the type casting mold. "The important fact," says Mr. Ivins, "is that printing first became a business at Mainz in the years between 1450 and 1460 and spread from there over the world."[5] The first dated piece of type printing is an indulgence of Pope Nicholas V of 1454. The famous Gutenberg Bible, also known as the Mazarin or 42-line Bible, was printed about 1456. This is one of the earliest printed books, a copy of which was recently purchased at the Hoe sale by Mr. Henry E. Huntington for fifty thousand dollars, the highest price ever paid for a book.

UNIQUE ASSOCIATION BOOK

Speaking of Bibles, as we were, it might be well to mention here that collecting Bibles constitutes a most fascinating branch of book collecting, and many bibliophiles devote their efforts to this specialty. A little girl, the daughter of a prominent Bible collector, having heard much about the famous acquisitions of her father, made the astounding statement to a little friend of hers, whose father was also a collector, that "My Dad bought the original Bible, con-

[5] "The Arts of the Book," W. M. Ivins, Jr.

taining the autograph of the Lord." We doubt whether in bibliophile competition any greater achievement than that can be found.

The printing of the folio Bible during the reign of Henry VIII (1491-1547) gave great importance to the art of bookbinding. The first edition consisted of 2,500 copies, one of which was set up in every church in England, and secured to a desk by a chain. Within three years there were seven editions of this work.

BOOKBINDING

One of the many charms of books is the infinite variety of the bindings which enclose them. There is something fascinating about the "feel" of a well-bound book. By "well bound," we do not necessarily mean "elegantly bound." A well-bound book should open with ease, so that it may be read without the necessity of holding down the pages. The edges of the covers or "boards," as they are called by bibliophiles, should be perfectly square. The leather should turn over the edges smoothly and without inequalities, and be of a clear and uniform color, free from imperfection or varying shades. The end papers, or papers inside the covers, should be cut in such a manner as to leave the same extent of marginal leather all around. They should be pasted down evenly, particularly at the fold where the book hinges. The fold itself should be perfectly smooth and free from

COSMOGRAPHIAE

Capadociam/ Pamphiliam/ Lidiã/ Ciliciã/ Armenias maiorem & minorem. Colchiden/Hircaniam Hiberiam/ Albaniam: & præterea multas quas singillatim enumerare longa mora esset. Ita dicta ab eius nominis regina.

¶ Nunc vero & hę partes sunt latius lustratæ/ & alia quarta pars per Americũ Vesputium(vt in sequentibus audietur) inuenta est: quã non video cur quis iure vetet ab Americo inuentore sagacis ingenij viro Amerigen quasi Americi terram/ siue Americam dicendam: cum & Europa & Asia a mulieribus sua sortita sint nomina. Eius sitũ & gentis mores ex bis binis Americi nauigationibus quę sequũtur liquide intelligi datur.

Americo

¶ Hunc in modum terra iam quadripartita cognoscitur: & sunt tres primæ partes cõtinentes: quarta est insula: cum omni quãq; mari circũdata cõspiciatur. Et licet mare vnũ sit quẽadmodum & ipsa tellus: multis tamen finibus distinctum/ & innumeris repletum insulis varia sibi noĩa assumit: quæ in Cosmographię tabulis conspiciuntur: & Priscianus in tralatione Dionisij talibus enumerat versibus.

Priscia.

Circuit Oceani gurges tamen vndiq; vastus
Qui q̃uis vnus sit/ plurima nomina sumit.
Finibus Hesperijs Athlanticus ille vocatur
At Boreę qua gens furit Armiaspa sub armis
Dicit̃ ille piger necnon Satur. idẽ mortuus est alijs.

REDUCED FACSIMILE OF PAGE FROM "COSMOGRAPHIA RUDIMENTA" OF HYLACOMYLUS, PRINTED 1507. THIS IS THE FIRST PROPOSAL TO NAME THE NEW CONTINENT "AMERICA"

creases. If the edges are gilded, they should be smooth and of uniform tint. The tooling on the back and sides should be smooth, sharp and clear.[6]

BYZANTINE BINDING

As early as the sixth century, the binding of manuscripts by the monks had been carried to a high plane. The manuscripts were bound between boards which were afterwards decorated with metal and jewels. This style of binding was known as Byzantine.

The celebrated manuscript of St. Cuthbert's Gospels, written between 698 and 720 A. D., was bound in velvet intermixed with silver and had a broad silver border; the center and border were inlaid with gems. This book is one of the oldest in the library of the British Museum. Most of the books so bound were destroyed by people seeking for gems supposed to be hidden in their covers.

GOLDEN AGE OF BOOKBINDING

Between the tenth and fourteenth centuries, the monks in England, having improved upon the designs of the books that were brought from the East, became the foremost binders of Europe. They bound books by stretching leather over the boards and decorating them with the

[6] "A Handy Book About Books," John Power (London, 1879).

impress of small stamps bearing conventional designs.

After the introduction of the printing press great impetus was given to the binding of books. Bookbinding was increased to such an extent that it became a separate and distinct trade. At this time gold leaf in the decoration of bindings was introduced into Venice from the East. All of which tended to make the fifteenth and the beginning of the sixteenth century the finest in the history of bookbinding.

Morocco leather now came into use, and with the aid of fine and delicate tools for designing the covers, a foundation was laid for an exquisite art in the decoration of bindings. The British Museum, the Metropolitan Museum, the Public Library in New York, the Vatican, and other important public institutions, have a large number of these beautiful Venetian bindings. Many of them have fallen into the hands of private collectors, among the most noteworthy of which is the celebrated Morgan Library, which has recently become a semi-public institution.

JEAN GROLIER

Venice had now become the center of this rich ornamentation, and the distinctive character of the designs originated there gave rise to the Venetian pattern of tooling. The two most celebrated patrons of the art of bookbinding in Venice were Tommaso Maioli, and Jean Grolier

of Lyons. Grolier had his books bound under his own supervision, and in such a manner that to-day they cannot be equaled in their beauty of design, or in excellency of workmanship.

According to W. M. Ivins, Jr., Grolier had two kinds of bindings: "Those made for him were bound in very smooth calf or morocco, varying in color from reddish brown to olive green, on pasteboard covers, and usually bore, in addition to the title, his famous 'Io Grolerii et Amicorum' stamped upon the front cover; upon the back cover, one or another of his several mottoes, the best known being the worthy adaptation from Psalm CXLII, 'Portio mea Dominie sit in terra viventum' (Let my portion, O Lord, be in the land of the living).

"The first gold-tooled bindings made for an individual, as distinct from those made for a publisher or stationer, appeared to have been made for him.

"Grolier's other bindings, in which he wrote his name, seem to have been either trade bindings, or those made for presentation to him, not a few of them being in the so-called 'Lyonnese' style, which came into vogue in the second third of the sixteenth century."

The acquisition of a book bound by Grolier is a mark at which the advanced book collector aims. The name of Grolier is a byword with book collectors, and the principal book club in America, namely, the Grolier Club in New York, was named after this great patron.

Bookbinding in France was given impetus by the fine work done for Grolier in Venice, and there followed the famous French school of binders, led by Nicolas and Clovis Eve in the sixteenth century, Les Gascons and Du Seuils in the seventeenth, and Padeloup and Derôme in the eighteenth century.[7]

Books in Germany were generally bound in pigskin, vellum or calf. Calf predominated because of its softness, its smooth surface, and the great advantages for blind tooling. Blind tooling is the impressing of designs, without the use of gold.

NAMES WITH WHICH TO CONJURE

Although there were several earlier binders in England, Samuel Merne, binder to Charles II, stands out prominently; he originated the "Cottage" style of ornamentation. Robert Harley, the Earl of Oxford, founded a type of binding in the eighteenth century known as the "Harleian" style. His books were bound in red morocco, with center panels surrounded by a broad, tooled border.

Other binders of the eighteenth century were Baumgarten, Benedict, Staggmeier and Kalthoeber. The latter introduced the painting of edges.

Roger Paine is the outstanding binder toward the end of the eighteenth century; he always

[7] Everyman's Encyclopedia.

finished his bindings in accordance with the character of the book. Later came Lewis, Mackenzie, Hayday and Zaehnsdorf.

At the present time the art of binding is having its renaissance, after a period of stagnation during the nineteenth century. To-day books are most generally covered with cloth; this is done by machinery in large quantities and at a rapid rate. Cloth binding is ordinarily called "casing," whereas the term "binding" is reserved for leather-covered books.

SIGNATURES

The novice in book collecting is often puzzled by the meaning of the terms "folio," "4to," "8vo," "12mo," etc. They stand, respectively, for "quarto," "octavo" and "duodecimo." An explanation of this is as follows: books are sent to the bindery from the printer in sheets which require folding; each sheet is numbered or marked with a "signature." The number of folds in a sheet designates a book as a "folio," "quarto," "octavo," "duodecimo," etc. In a folio the sheets are folded once down the center, making two leaves to the sheet, or four pages. In a quarto the sheets are folded down the middle and then across, making four leaves to the sheet; octavo means eight leaves, and so on.

At one time, when sheets of paper were all the same size, the terms "folio," "quarto," "octavo," etc., signified a definite-sized book, but to-day sheets vary in size and we have vari-

ous-sized books with the same sized signatures. Octavos, for instance, are known as medium octavos, royal octavos, etc., signifying the different sized books. In many books, the signature itself can be seen. If you will glance through a book you will often note at the bottom of the page a number or letter, or series of letters. By counting the pages from the page on which you find a signature until you come to the next signature, you will be able to determine whether a book is quarto, octavo, etc. You will count eight leaves for an octavo, and twelve leaves for a duodecimo, etc.

Books are usually bound with split sheepskin, sheepskin, morocco (which is a goatskin), Levant (which is also goatskin, differing from morocco in its grain), calfskin or other leather, parchment, vellum, cloth, velvet and imitation leather.

Books bound in leather are designated as whole leather, three-quarters leather, half leather. Whole leather, as the term signifies, has a complete binding of leather; three-quarters leather, the corners and back are made of leather, the sides being cloth or paper; half leather, merely the back is leather. There is also a limp binding which is a flexible cover pasted directly to the back of the book.

NUCLEUS FOR THE LIBRARY

There have been many lists of books prepared, which were supposed to include the most im-

portant books that should be found in a small, but well-balanced library. Although, as we said before, the book collector should follow his desires and whims in the matter of purchasing books, it is decidedly advantageous if he have a definite end in view. Ultimately, it becomes a necessity to specialize but the beginner should endeavor to make the foundation of his library as nearly representative of the great books that have been handed down from age to age as is possible.

Some years ago the "Pall Mall Gazette" published a list of one hundred books that should be found in the well-organized private library. This list is included in H. B. Wheatley's book, "How to Form a Library," and is given below:

NON-CHRISTIAN MORALISTS.

Marcus Aurelius, "Meditations."
Epictetus, "Encheiridion."
Confucius, "Analects."
Aristotle, "Ethics."
Mahomet, "Koran."

THEOLOGY AND DEVOTION.

Apostolic Fathers, "Wake's Collection."
St. Augustine, "Confessions."
Thomas à Kempis, "Imitation."
Pascal, "Pensées."
Spinoza, "Tractatus Theologico-Politicus."
Butler, "Analogy."

Jeremy Taylor, "Holy Living and Holy Dying."
Keble, "Christian Year."
Bunyan, "Pilgrim's Progress."

Classics.

Aristotle, "Politics."
Plato, "Phaedo" and "Republic."
Æsop, "Fables."
Demosthenes, "De Corona."
Lucretius.
Plutarch.
Horace.
Cicero, "De Officiis," "De Amicitia," and "De Senectute."

Epic Poetry.

Homer, "Iliad" and "Odyssey."
Hesiod.
Virgil.
Niebelungenlied.
Malory, "Morte d'Arthur."

Eastern Poetry.

"Mahabharata" and "Ramayana" (epitomized by Talboys Wheeler).
Firdausi, "Shah-nameh" (translated by Atkinson).
"She-king" (Chinese Odes).

Greek Dramatists.

Æschylus, "Prometheus," "The House of "Atreus," "Trilogy," or "Persæ."

Sophocles, "Œdipus," Trilogy.
Euripides, "Medea."
Aristophanes, "The Knights."

History.

Herodotus.
Thucydides.
Xenophon, "Anabasis."
Tacitus, "Germania."
Gibbon, "Decline and Fall of the Roman Empire."
Voltaire, "Charles XII" or "Louis XIV."
Hume, "England."
Grote, "Greece."

Philosophy.

Bacon, "Novum Organum."
Mill, "Logic" and "Political Economy."
Darwin, "Origin of Species."
Smith, "Wealth of Nations" (selections).
Berkeley, "Human Knowledge."
Descartes, "Discourse sur la Methode."
Locke, "Conduct of the Understanding."
Lewes, "History of Philosophy."

Travels.

Cook, "Voyages."
Darwin, "Naturalist in the Beagle."

Poetry and General Literature.

Shakespeare.
Milton.

Dante.
Spencer.
Scott.
Wordsworth.
Pope.
Southey.
Longfellow.
Goldsmith, "Vicar of Wakefield."
Swift, "Gulliver's Travels."
Defoe, "Robinson Crusoe."
"The Arabian Nights."
"Don Quixote."
Boswell, "Johnson."
Burke, "Select Works."
Essayists—Addison, Hume, Montaigne, Macaulay, Emerson.

SOMETHING ABOUT CATALOGUES

We have before us as we write a typical catalogue of "Rare and Choice Books," "First Editions of Modern Authors," [8] etc. Let us peruse it and see what are the tendencies of some modern book collectors. The first item which interests us is as follows:

"AMBER WITCH. Mary Schweidler, The Amber Witch. The Most Interesting Trial for Witchcraft ever known. Printed from an imperfect manuscript by her father, pastor of Coserow in the Island of Usedom. Edited by William Meinhold. Translated by Lady Duff Gordon.

[8] Harry F. Marks, 187 Broadway, New York.

Folio, uncut. Printed at the Ballantyne Press, London: The Vale Press. 1903 ....$15.00

"The fine 'Vale Press' Limited Edition.

"A famous literary forgery, professing to be a story of the olden time. When it first appeared the great scholars applied severe tests of historical and philological criticism to the work, and declared it to be an undoubted relic of Antiquity. Even those acute neologists, the Tubingen reviewers, found it 'hoary with the lapse of centuries.' When the wise ones had fully committed themselves, William Meinhold came forward and proved beyond a doubt that he was himself the Author."

It will be noted that the well-compiled catalogue is interesting in itself and decidedly instructive. Much can be learned of books and their history from the perusal of catalogues.

"Armorial Binding. With Royal Coronet of Louis XVIII of France. Almanach Royal, pourles annés 1814 et 1815. Royal Arms on title, 8vo, full green morocco, gilt line border enclosing centre medallion of inlaid blue morocco, stamped in gilt with the three fleur-de-lis of France; richly gilt foliate design surrounds the medallion, the Royal Coronet above, and the cross of the Ordre du Saint-Esprit below; gilt edges. Paris, 1815 ....$47.50

"Fine specimen, from the library of Louis XVIII."

"Armorial Binding. Paterculus (V. V.). C. Velleii Paterculi quæ supersunt. N. Heinsius recensuit. Engraved title. 1678. Also, Thuanus (J. A.). Opera atque

Studio I. Melanchonis. 1678. 2 vols. in one, 16mo, full old red morocco, triple gilt line border, centre gilt medallions, the one on front stamped in gilt letters, containing the words: 'Vsvm. Car. Santi Clementis S.R.E. Camer,' while on the back is the Arms of Cardinal Albani, surmounted with a cross and the Cardinal's hat; gilt panelled back, inside gilt dentelle borders; gilt edges, skillfully rehinged. Amstelodami: Ex Officina Elzeviriana, 1678 ....$32.50

"Fine and scarce Elzevir, from the library of Cardinal Albani."

"ARMORIAL BINDING. Boccaccio (Giovanni). Le Philocope de Messire Iean Boccace Florentin, 24 mo, full old mottled calf, with the Arms of the Marquis de Saint Ange stamped in gilt in center of sides, gilt pannelled back, sprinkled edges. Paris, 1575. Rare Edition.....$37.50

"Louis-Urbain de Caumartin, Marquis de Saint Ange, was a famous collector of beautiful bindings. His library was unique in his generation. The present volume contains his bookplate, which is a duplicate of the stamp on the binding, on inside of front cover."

The three items above are full of historical and romantic interest.

"ASSOCIATION COPY. Queen Victoria. Leaves from the Journal of Our Life in the Highlands from 1848 to 1861. Edited by Arthur Helps. New Edition. 12mo, original green cloth, uncut. London, 1877 ......$25.00

"With the inscription 'Presented to the Worcester Dio Lodge of The Girls' Friendly Society, by Victoria, R. I., March, 1885,' entirely in the autograph of Queen Victoria."

Association books are among the most interesting to collect. They usually have an autographed inscription of some important person, often the author or his friends, which adds charm and value to the book. The term "uncut" as used by collectors and in catalogues does not mean precisely what it seems to signify. "Uncut" pages are pages that have not been smoothed at the edges and ends, and which may or may not have been cut apart.

A SIX-THOUSAND-DOLLAR DICKENS

The next item from which we quote illustrates the strictly orthodox book collectors and specialists' regard for minutiæ and the value which they attach to it. Most of Dickens' books were originally issued in the form of small paper-covered magazines, periodically in "parts." They have much greater value than the first editions in book form.

"Dickens (Charles). The Posthumous Papers of the Pickwick Club, containing a faithful Record of the Perambulations, Perils, Travels, Adventures and Sporting Transactions of the Corresponding Members. Edited by 'Boz.' With illustrations by Seymour, Buss and 'Phiz.' 8vo, in the Original 20 in 19 Parts, with wrappers and advertisements (as below described), uncut. Enclosed in full green levant morocco, solander case, with inner protecting cloth cover. On the inside of this cover are written many additional and valuable bibliographical 'points,' by Mr. Wallace, in his autograph. London, 1836-1837 ....$6,000.00

"First Edition.

"The Renowned E. N. Lapham-Walter T. Wallace Copy, detailed collation of which appeared in the Wallace catalogue, when this copy was sold at the American Art Galleries in 1920. It is here again presented. All the numbers are dated 1836.

"Part I. Covers correct, 'With four illustrations by Seymour' on front cover (which only appears on the first issue) and which was afterwards altered to 'With Illustrations,' inside front cover blank, back inside cover blank, reverse of which commences 'The Library of Fiction.' With the Excessively Rare First Pickwick Advertisement, p. 4, announcing 'Sunday Under Three Heads' (this, however, is misplaced; should be in Part III). It is Thought that Only One Other Copy of This Advertisement Is Known to Exist. The four illustrations are actually from the Seymour plates, of which it is said that not more than 300 impressions were taken, the plates having been so lightly etched that they would not stand the strain of further printing. When, on the introduction of Sam Weller, the book was assured a success, copies of these plates were made with the following differences: Plate 1: 'Mr. Pickwick addresses the Club,' Seymour plate, Mr. Pickwick's buttons on his vest are on the right side, 'Phiz' plate, the buttons are on the left side. Plate 2: 'The Pugnacious Cabman.' The milkmaid is clearly defined in the original and not so in the 'Phiz' copy. Plate 3: 'The Sagacious Dog.' The game-keeper's gun has lock and trigger; second state, both are omitted. Plate 4: 'Dr. Slammer's defiance of Jingle.' There are 10 boards on floor, second state has 11. Page 26, the last

page of this number, is headed 'Posthumous Papers, etc.,' instead of 'Posthumous Papers of.'

"Part II. Covers correct, 'With four Illustrations by Seymour' on front cover (which only appears on the first issue), only three, however, were issued, the third, 'The Dying Clown,' the artist having scarcely finished when he blew his brains out, it being said on account of Dickens reaping all the benefit, and he only a paid servant. Inside front cover blank, back inside cover blank, outside back cover advertises 'The Library of Fiction.' Also the Very Rare Printed Address Announcing the Death of Seymour.

. . . .

. . . .

"The Foregoing Will Serve to Describe This Very Fine Copy, Which Can Justly Be Called One of the Finest in Existence.

"Laid in is considerable bibliographical data, including a letter from the late Luther S. Livingston, which commences, 'You Own One of the Best Copies of the Pickwick Papers in Parts, in This Country.'

"Mr. Harry Widener and I sat up the good part of the night comparing his copy, mine (Lapham-Wallace copy) and the H. B. Smith copy collation, and agreed the Lapham-Wallace (the above) copy was the criterion of 'points,' conceding the charm of Presentation feature to his and Smith's copy.' W. T. Wallace.

" 'One of the Finest Copies of the Immortal 'Pickwick' in Existence, Containing Several Unusual Features (Some of Which Are Not in Any Other Copy with One Exception) That We Can Trace After Exhaustive Research.'

"Quotation from the 'Lapham' catalogue."

The same book, also in original parts, but without the minute "collectors' points" is catalogued at but a fraction of the other.

"Pickwick in the Original Parts.

"Dickens (Charles). The Posthumous Papers of the Pickwick Club. Edited by 'Boz.' With illustrations by Seymour, and 'Phiz' (H. K. Browne.) First Edition, in the Original 20 parts in 19, with the wrappers and advertisements as issued, uncut, preserved in art linen wrapper, and enclosed in handsome ¾ morocco case. London. 1836-7 ....$325.00

"A nice copy of the scarce First Edition, in parts, at an exceptionally low price."

Autographed letters and manscripts add greatly to the interest and value of a book collection, particularly if they are letters written by an author in whose works the collector is specializing.

"Dickens (Charles). Autograph Letter Signed. 2 pp. 12mo. Gad's Hill Place, Higham by Rochester, Kent, Sunday, Twenty-Sixth June 1859. To Miss Jerrold. 1859 ....$75.00

"A Most Interesting Autograph Letter, written to Miss Jerrold two years after the death of her father, with reference to the Fund which Dickens and other literary characters had raised in memory of Douglas Jerrold. It shows Dickens' kindness and his ever-ready desire to be helpful to his friends and those who were in need. Reads in part,—

"'Believe me, I am really at heart distressed by what you say of the uneasiness you have to bear. God knows I would relieve it if I could; and that my only desire in this matter, is, to do what I am certain your dear father would have asked me to do, if he could have spoken on your behalf. Pray tell me, for my information and that of the friends associated with me, what the deed was, which you signed on the 9th of Feb. 1857, and whether you feel or do not feel your claim on this money to be superior to any other human being's.'"

MORE MODERATE PRICES

Quoting from another catalogue,[9] we find that the collector of more modest means can also add some Dickens first editions to his collection:

"DICKENS (Charles). The Haunted Man and the Ghost's Bargain. A fancy for Christmas Time. Woodcut frontispiece, engraved title, and 14 illustrations by Leech, Stanfield, Stone and Tenniel. 16mo, three-quarters levant morocco gilt, gilt panel back, gilt top, uncut, by Zaehnsdorf. London, 1848...........$10.00

"First Edition. Fine Copy.

"DICKENS (Charles). Hunted Down; A Story, with Some account of Thomas Griffiths Wainewright, the Poisoner. Woodcut vignette of 'The Fatal House' on title. 16mo, three-quarters crimson morocco, gilt back and sides, gilt top. London, n. d., (1870)........$6.50

"First English Edition. Fine copy. This powerful story was originally written by Charles Dickens for the proprietor of a foreign newspaper."

[9] Harry Stone, 137 Fourth Ave., New York.

At the moment, that great American essayist and philosopher, Ralph Waldo Emerson, is not in vogue among collectors and copies of his first editions may be purchased at comparatively low prices, for witness:

"EMERSON (R. W.). English Traits. 12mo, original cloth. Boston, 1856 .... $6.50

"First Edition. (The top margins with a few pages slightly waterstained)."

"EMERSON (R. W.). Poems. With the four leaves of advertisements dated January 1, 1847. 12 mo, original boards, paper label, uncut as issued. Boston, 1847. $15.00

"First Edition. This is an unusually fine copy of this scarce work, although joints are slightly cracked and a small crack on back."

Robert Louis Stevenson is in great demand by collectors at the present time, and the prices have risen enormously, but there are still to be had some reasonably priced first editions:

"STEVENSON (R. L.). Records of a Family of Engineers. First Edition. Post 8vo, original cloth. London, 1912 .... $9.00

"Fine copy."

"STEVENSON (R. L.). Some letters, with an Introduction by Horace Townsend. With portrait and facsimile letter, nicely printed on handmade paper. Thin 8vo, blue paper boards, white backs. N. Y. 1902....... $5.00

"First Edition. This volume contains five letters written to Mr. Trevor Haddon, when an art student, at various dates between the summer of 1879 and April, 1884."

Among the modern authors whose first editions are being collected at the present time are:

Henry James
William James
Arthur Machen
Walter de la Mare
Samuel Butler
Lewis Carroll
Bernard Shaw
Thomas Hardy
Robert Louis Stevenson
George Meredith
James Branch Cabell
Max Beerbohm
Aldous Huxley
John Galsworthy
Christopher Morley
Willa Cather
Oscar Wilde
Joseph Conrad

and others. Already, as previously mentioned, Stevenson, as well as several others in this list, are commanding high prices. It is a rather fascinating gamble to commence collecting first editions of contemporary authors before they have become in general demand.

The best way to become acquainted with book-collecting lore is to read books on the subject, the titles of some being included in the bibliography at the end of this chapter, and above all, visit

the old bookshops and imbibe their dusty, wraithlike, bookish atmosphere.

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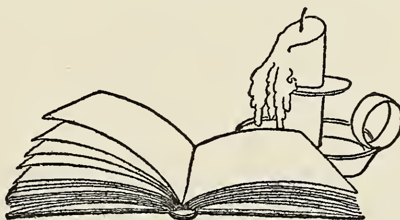
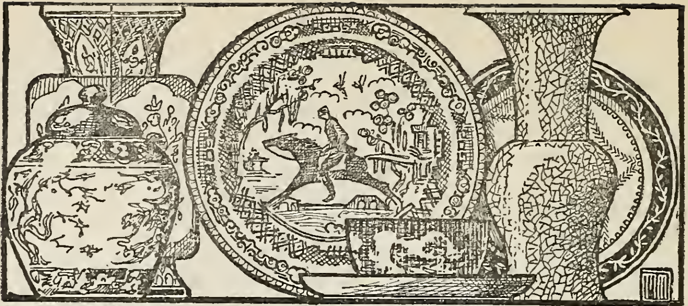




CHINA & PORCELAIN

JUNIUS HIBBS had won his case for a grateful Chinaman over thirteen months before he received the large wooden box from Chin-Kiang, a city of which he had heard as "somewhere in China." Indeed, he had forgotten about this cheery little Oriental soon after the latter had gone back to the mysterious empire beyond the Pacific.

In their small apartment on the corner of Columbus Avenue, the Hibbses could hear the puffing locomotives as they drew their load up the long hill between the 81st and 93rd Street stations. There they opened the box with mixed feelings of pleasure and disappointment, for as Mrs. Hibbs remarked, "If it were only a piece of jade," and Miss Hibbs, not quite eighteen added, "or crystallized ginger!" but the lawyer rebuked them mildly, reminding them that Li-Lo was under no further obligations to them, and had sent them this vase as an additional

token of his appreciation. Mrs. Hibbs sighed as she assented resignedly to setting it on the mantel out of the way,—it was another nuisance with its dragon-shaped handles to collect the dust.

* * * * *

George Boncell was forced to take shelter from the deluge beneath the friendly awning of the little shop near the new 86th Street "L" station. As he stood there impatiently, his eye wandered listlessly over the dreary contents of the window. It was evidently one of those antique shops where the stock consists chiefly of discarded household articles. As Boncell loved beautiful things, he was about to turn his head away when his experienced eye caught a glimpse of a half-hidden object. It was tucked in between an unspeakably ugly china-closet and a more-than-generously overstuffed "easy chair," but there was just enough of its glorious green decoration showing to intrigue the famous china collector.

"That's a very fine piece," the dealer assured him, while Mr. Boncell held it in his hands and made a careful examination, trying all the time to steady his voice for propounding the important question. "That vase is worth twice what I'm asking," was the expected reply, "I'll have to get twenty-five dollars, and it's a bargain,—and the dealer, noticing what he mistook for hesitation on the part of the other, added, "I

might take ten per cent. off for a new customer. I've had it two years now; bought from a widow, a lawyer's wife,—thank you, sir, where shall I send it?—the lawyer's family moved out West,—take it with you?—my dear sir—I shall be only too glad,—no?—Very well."

* * * * *

At the Museum of Art, in the section devoted to Chinese Pottery and Porcelain, the visitor's attention is drawn to a Ming vase, with its beautiful green decorations in enamel on biscuit, and its dragon-shaped handles. It stands in a case by itself, and one is impressed with the thought that this must indeed be a rare specimen. In fact, it is reputed to have been valued at thousands of dollars by a well-known collector. It is also whispered that the vase was bought for the sum of $22.50.

* * * * *

When a subject is brought up, with which one is unfamiliar, the first reaction is of involuntary resentment. This may be followed, almost immediately, by respect or even reverence, but the alien subject is never admitted to the hospitality of the brain without at least a brief struggle with prejudice. Although contrary to general belief, it is familiarity that breeds respect while ignorance is conducive to contempt.

The subject of pottery and porcelain must seem stupendous and dreary to the person whose

knowledge is limited to a hazy idea that tea-cups are china and bath tubs are porcelain. We cannot deny the fact that the subject is vast, and the ramifications many,—but there is a fascinating link connecting pottery with humanity that must necessarily appeal to any one with a love for the romance of life.

We shall attempt in this chapter to make easier the reading of the elementary books that should, in combination with frequent visits to the museum collections, arouse enthusiasm for one of the most interesting of all the hobbies.

Sir James Yoxall in his book entitled "More About Collecting," after assailing the authors of porcelain books on account of their devotion to detail and lack of any information on what he terms "general conceptions," says:

"I suppose not one person in a thousand looks at a great picture with really instructed sight, and that is truer still of looking at the best porcelain. Not until one possesses a general idea of what to look for, can one see what ought to be looked for, and what is eminently worth being seen. Experts who write learned books on 'Oriental' seem either unwilling or unable to explain their lore lucidly. I have a shelf which simply groans with books on porcelain, that yet tell the beginner next to nothing of what he wants to know and ought to know, and do little to help him to possess a seeing eye."

There is something fundamental about pottery that gives it a well-nigh universal appeal.

Perhaps it is because pottery dates from the beginning of things and that it was probably the first means of self-expression. Fortunate indeed is he whose interest in porcelain springs from the appreciation of crude pottery for he is able to penetrate beneath the glaze of mere sensual beauty and feel the true urge of the art.

Those who have seen the potter at his trade will understand why, from time immemorial, the Potter and the Pot have been symbols for the Creator and Man. How gracefully the vessel gradually comes into being under the magic touch of the potter! How the pot grows fat, lean, grotesque, beautiful, according to the dictates of the potter's will and the mysterious power in his subtle hands!

Wherever we have found records of early man, we have almost always discovered pottery. It would seem as though at the very beginning, man came into being with a fleeting, haunting remembrance of the Potter at His wheel.

THREE CLASSES OF POTTERY

The word "pottery" is applied to all objects made out of a claylike mixture while in a plastic state, and which are transformed into permanent material by subsequent baking in a furnace. Pottery is divided into three classes: earthenware, stoneware and porcelain. In order to distinguish between these wares, we would remind the reader of the appearance of a cross

section of broken china. In one kind of china he will recall having seen a sandy, grayish-yellow, earthy composition, particles of which he can detach with a sharp knife. Such a piece is earthenware or faience, as it is sometimes called. This is the oldest type of pottery and is still used for the largest variety of purposes. Terra-cotta, used for the adornment of the fronts of buildings in polychrome, glaze, or the questionable purpose of imitating genuine stone, is earthenware. This ware is neither translucent nor vitrified.

If the reader will now recall another kind of china, the cross section of which, when broken, exhibits a whitish, hard, vitrified, shell-like composition which, however, does not resemble glass, and which will resist the attack of the knife, he has either stoneware or porcelain. If the piece is translucent it is porcelain,—if not, it is stoneware. On the bottom of virtually all pottery there is a small rim where the bare paste is exposed. By examining this, those who have a burning curiosity will be saved the necessity of breaking the object in order to classify it.

PASTE AND GLAZE

At the outset it should be understood that "paste" is a term used to denote the composition of the body, and "glaze," to mean the glassy coating that is applied to the paste, before or after firing.

The paste and glaze are important factors in determining the identity of the ware, but in addition to these the craftsmanship, color, ornamentation, shape and marks have a deep significance. It is through his knowledge of these various points that the expert can readily distinguish almost any piece he sees,—to the utter discouragement of the beginner, to whom all pottery looks distressingly similar. Texture being a revealing quality, the finger is as important a guide as the eye; therefore the collector should not miss any opportunity to handle as many types as possible for purposes of comparison.

PORCELAIN

All porcelain, whether of oriental or occidental origin, is made of a mixture of a clay known as kaolin, and a species of decomposed stone and clay known as petuntse. These two essential ingredients serve to make porcelain distinctly different from all other ware. The vessels are fashioned on the potter's wheel or they are cast, but in either case they are fired in furnaces at high temperatures. The French term "grand-feu" means the highest temperatures.

The paste of different wares varies in the proportion of the kaolin to the petuntse. The larger the proportion of the former, the harder the ware. When the paste is very hard, it is termed "severe"; when comparatively soft, "mild."

The French, "pâte-tendre," is generally employed to denote soft paste.

The color of the paste is generally a clue as to its comparative severity, and even to the beginner there will be little difficulty in observing a difference between the wares of China and those of Germany, such as Dresden, which is also known as Meissen, the name of the city where it is made. Most Chinese porcelain has a slightly ivory-colored paste, whereas that of Meissen ware is chalky white and even *looks* hard to the untrained eye. The composition of the paste was a great mystery to the occidental ceramist. The confusion of the word "porcelain" in connection with ancient oriental ware, such as shells, mother-of-pearl, etc., led to the belief that these formed a base in the composition of porcelain. Theoretical formulæ were advanced involving the mellowing of old lobster, crab, oyster and egg shells, and other similar ingredients.

MARCO POLO ON PORCELAIN

Marco Polo, in the fourteenth century, in his travels, writes of a city he calls Tin-Gui (China):

"Of this place, there is nothing further to be observed than that cups or bowls and dishes of porcelain ware are there manufactured. The process was explained to me as follows: they collect a certain kind of earth as it were from a

mine and lay it in a great heap, suffer it to be exposed to the wind, the rain and the sun for thirty or forty years, during which time it is never disturbed. By this, it becomes refined and fit for being wrought into the vessels above mentioned. Such colors as may be thought proper are then laid on, and the ware is afterwards baked in ovens or furnaces. Those persons, therefore, who cause the earth to be dug, collect it for their children and grandchildren. Great quantities of the manufacture are sold in the city, and for a Venetian groat[1] you may purchase eight porcelain cups."

The great charm of porcelain is largely due to the chemical affinity of the glaze for the paste, in the heat of the furnace. Particularly in the Chinese porcelains, the glaze of satinlike coating seems to melt into the paste, much as oil soaks into paper, rendering it translucent. The glaze is a mixture of kaolin and petuntse, to which have been added other substances such as lime, lead, etc. It is applied either with a brush, by spraying, or by dipping

DISTINGUISHING CHARACTERISTICS

Upon examining two wares of porcelain, certain differences will be found. In one or the other, perhaps, the hand of the potter may be faintly discerned, or the "foot" will show traces of its having been cut off by means of a thread,

[1] About eight cents.

or a wire; or perhaps, on close scrutiny, the piece reveals a faint seam, indicating that it had been cast; or, again, we may observe evidence of the "spur-marks" in the base. The craftsmanship of the decoration, that is, the feeling as well as the skill of the workman, are other means of placing the object. Although the porcelains of China were imitated in Japan and in Europe, the decorations are, no matter how faithfully copied, distinguishable by reason of a difference in the national "feeling." Even when the Chinese attempted to reproduce their own work, they were influenced by the change in the times, which reacted on their mental functioning, and is reflected by their more sophisticated manual efforts.

We can often limit the age of specimens of china by the color, for it is obvious that if a particular color was introduced at a definitely known time, it could not have been made before then. Colors were always derived from metals, mainly from their oxides. The earliest were from iron, which yielded the browns, reds, yellows and olive greens; from copper, the greens, blues and crimsons. Gradually, cobalt, chromium, uranium, gold and other metals were used. The earliest colors were the celadon tones,—mostly a grayish, light green, which is often jadelike in its appearance. But different colors were also obtained by varying the heat of the furnace, as well as by changing the proportions of the chemicals. Enamels, which are al-

ways applied over the glaze, are a flux of lead silicate with the metal oxides, and must be fired at lower temperatures.

The earliest decorations of porcelains were light incisions in the paste,—under the glaze. Later, the paste was decorated before the glazing and still later, the vessel was glazed; then enameled and refired. The national characteristic ornamentation, even where it simulates that of another country, is usually detectable to the expert. The decoration of the Chinese porcelains was, without doubt, the finest, as it was always in keeping with the "feeling" and shape of the object. Chinese decoration was always subordinate to the object itself, and never obtruded nor assumed the realistic rôle as did the decoration of some of the wares of the Western factories.

As to the shapes, the same can be said for them, as has been said of color. If a shape is known to have been introduced at a certain era, the object must be of an age no greater than that would allow.

Marks are the least reliable method of determining porcelains. The marks on Chinese ware are often nothing more than a description of the decoration, a motto or other irrelevant information. Marks are the easiest things of all to forge, and we find the crossed swords of Meissen on Sèvres; or the marks of one factory brazenly employed in marking the product of another in many of the English porcelains. Marks serve

rather to confirm all other evidences, than to act as a point from which to base a premise of origin.

CHINESE PORCELAIN

The Chinese discovered the secret of making porcelain more than eight centuries before the first porcelain was made in Europe.[2] There are specimens of vitrified ware that have come down to us from the tenth century that are indisputably porcelaneous in structure. Chinese porcelains attained their zenith between 1600 and 1800. A remarkable thing about the development of the Chinese porcelains is that they were the product of virtually a single porcelain center—Ching-te-Chen. It is estimated that there were over a million inhabitants in this city of kilns, practically all of whom were engaged in the manufacture of porcelain.

> *"A burning town, or seeming so,*
> *Three thousand furnaces that glow."*

It is small wonder that so many fine examples of beautiful ware have been spared to us, considering how great the output from this center must have been during the eight or more centuries of its existence. There were some kilns devoted to the manufacture of porcelain exclusively for the imperial court.

[2] Porcelain was first made at Meissen, 1710-20, as the result of experiments of one Böttger.

The hobbyist is not likely to come in contact with ware antedating the end of the Ming dynasty, and for a beginning he should confine his studies to the best period of porcelain, the first three emperors of the Manchu or Ching dynasty: Kang Hsi (1661-1722), Yong Cheng (1722-1735) and Kien Lung (1735-1795). They cover the period contemporaneously with the three great Louis, in France, and the reigns of William and Mary, Queen Anne and the first three Georges of England.

It was during the early part of this period that the first importation of porcelain to Europe, in any appreciable quantity, was begun. What an impression upon almost every branch of European art these beautiful objects had, is seen in the fabrics, furniture and decoration of the period. (See Chapter on Furniture.)

Macaulay, in his History of England, describing the times of William and Mary, refers scathingly to the custom of collecting porcelain:

"Mary had acquired at the Hague a taste for the porcelain of China, and amused herself by forming at Hampton a vast collection of hideous images, and of vases on which houses, trees, bridges and mandarins were depicted in outrageous defiance of all the laws of perspective. The fashion, a frivolous and inelegant fashion it must be owned, which was thus set by the amiable Queen, spread fast and wide. In a few years, almost every great house in the kingdom contained a museum of these grotesque baubles.

Even statesmen and generals were not ashamed to be renowned as judges of teapots and dragons; and satirists long continued to repeat that a fine lady valued her mottled green pottery quite as much as she valued her monkey and much more than she valued her husband."

CHINESE PORCELAIN
Famille Verte
(KANG HSI PERIOD)
1661–1722

ANTIQUE PERSIAN PLATE
Sold in Berlin for $1,500 in 1913.
Evidently designed by the owner of a sense of humor and an inkling of the appearance of a Book of Hobbies.

The Dutch, Portuguese and English traders soon developed a flourishing trade in the blue-and-white ware and later in the three-color and five-color enamels of the *famille verte* and *famille rose,* which made so great an impression upon the occidental fancy. The factories in France, Germany, England, Holland and elsewhere made frantic efforts to turn out ware that

could compete with the oriental, but they succeeded only in developing their industries, the products of which even they acknowledged as inferior by comparison.

NOMENCLATURE

The nomenclature in pottery is likely to confuse the beginner. The most satisfactory way of acquiring an understanding is to haunt the porcelain gallery of some museum until the names and colors are fairly fixed in the mind.

Celadon has already been explained, but there are the so-called *famille noire, famille verte, famille rose, famille jaune,* etc., which are terms used to designate the predominating color of the decoration. The French terms have become firmly associated with porcelain and when translated they are fairly descriptive. *Sang-de-boeuf,* ox-blood; *blanc-de-Chine,* Chinese white; *rouge d'or,* red of gold; *clair de lune,* moonlight; *aubergine,* egg-plant; *flambé,* flame; *bleu-fouetté,* powder blue. Only the last needs further explanation, as it refers to the manner of applying the color, as much as to the color itself.

The English terms, coral red, peach-blow, mirror black and apple green are self-explanatory. The blue-and-white family is considered the most representative, that produced during the reign of Kang Hsi being most prized by the connoisseur. The ginger jar is not a vessel made for containing ginger, but was named so by the

early traders. Nor is "hawthorn" descriptive, as it is the prunus blossom that is meant, and not the English shrub which it somewhat resembles. However, when a piece is classified as hawthorn decoration, it is used, as are the other words in pottery, to denote the principal motif of the decoration.

An interest in the collecting of oriental porcelain would be encouraged by visiting the superb collections in the Metropolitan Museum of Art. The Altman collection is, unfortunately, separated from the Gallery of Oriental Ceramics, but should on no account be missed, as it contains some of the finest specimens of the best period of oriental porcelain. In another wing of that museum there is a fine collection of Italian majolica, Delft ware, early German stoneware, Meissen, French and English ware.

Japanese porcelains seem to offer an attractive field for the hobbyist who would specialize in the ware of one particular country, as they are yet to be had at prices that are attractive by comparison with those of other nations, and these old porcelains are very beautiful.

SPECIALIZATION

As in most other collecting hobbies, specialization is also desirable in collecting porcelain. Porcelain may be collected by devotion to one or more countries, by specializing in the wares from one or more reigns or factories, or by col-

lecting one or more kinds of vessels (such as pitchers, cups, vases, etc.), or by collecting specimens from each type of ware. There is immense pleasure to be had in the last. It is perhaps less thorough, but for those whose very happiness depends on variety, an interesting collection can be made of representative pieces from all wares.

SÈVRES

After the factory at Ching-te-Chen the most important is that of Sèvres, but the ceramist cannot think in terms of French pottery and porcelain without including the wares of Rouen, Moustiers, St. Cloud, Lille and Chantilly. The pâte-tendre of Sèvres attained such a high state of perfection during the last quarter of the eighteenth century that it is almost a tragedy in the annals of porcelain to recall its discontinuance shortly after 1800, when Broignart "improved" the French porcelain beyond redemption.

It has been stated by an authority that 90% of the work attributed to Sèvres, outside of the well-known Museum collections, are forgeries. Much of it was from the original biscuit in Sèvres, but painted and glazed in foreign countries with questionable skill.

DRESDEN

Dresden china, manufactured at Meissen, was the first porcelain made in Europe (1710-20),

and on account of its excessive hardness, is cold-looking. However, there is great charm in the figurines depicting social life of the times, which are to-day much sought after. The best period of Meissen ware was the last quarter of the eighteenth century.

Other German wares were made at scattered factories, some of which turned out an excellent product.

MEISSEN FIGURINE
(From "Porcelain, Oriental, Continental & British" by R.L. Hobson, Dutton 1906)

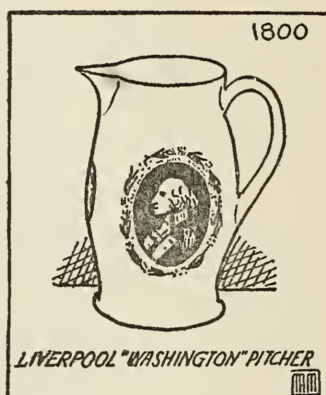
ENGLISH PORCELAIN

English porcelain is the field that is invaded most by American collectors of pottery.

Chelsea, Derby, Bow, Worcester, Lowestoft, Caughley, Minton, Spode, Longton Hall, Coalport, Swansea, Staffordshire and Nantgarw, are all names that conjure up a romantic history and distinctive wares.

English porcelain possesses a strong appeal by reason of its association with the days of the early republic.

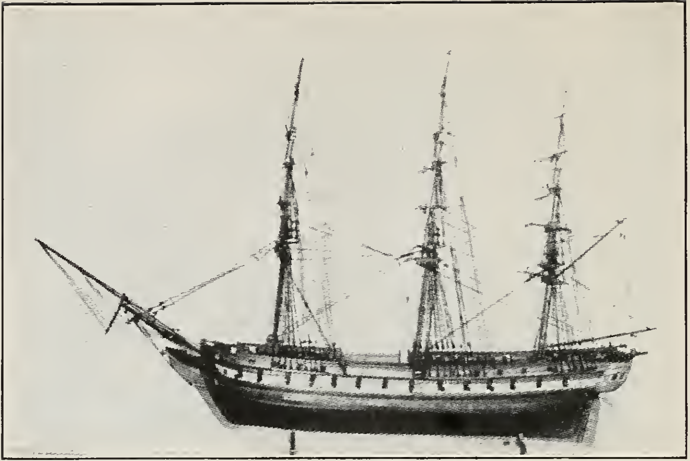
RALPH WOOD JR. TOBY JUG



LIVERPOOL "WASHINGTON" PITCHER

Wedgwood can hardly be called porcelain. It was really a stoneware, but of such fine quality that its popularity places it with its more aristocratic competitors. This was used extensively in the American colonies, and to-day we can pick up treasures occasionally in the "back country," for small amounts.

Another popular ware in the colonies was lustre ware, made principally at Staffordshire, England.



50-GUN FRIGATE, AMERICAN, 1812. BUILT WITH PLANKS ON RIBS; COMPLETE WITH CANNON ON TRUCKS AND OTHER FINELY MADE DECK IMPEDIMENTA; RIGGED IN MINUTE DETAIL; PORTIONS OF DECK AND HULL OPEN TO SHOW CONSTRUCTION. LENGTH, 42 INCHES. $800 AT CARLTON T. CHAPMAN SALE, N. Y., 1924.

CLIPPER SHIP, "YOUNG AMERICA," MODELLED IN FINE SHEER LINES; ROUNDED STERN; FINELY RIGGED IN EVERY DETAIL AND WITH ALL DECK IMPEDIMENTA. PERIOD, 1853. LENGTH, 40 INCHES. $400 AT CHAPMAN SALE, N. Y., 1924.

As long as the prices that porcelains bring at auction are less than reproductions would cost, there is little danger of forgery. Even were it possible to reproduce valuable specimens on a commercial basis, it is unlikely that a flood of any one design could inundate the market without causing suspicion and investigation.

We recall a recent sale where Spode cups and saucers went for under $15 and a remark-

WHIELDON CAULIFLOWER CHOCOLATE POT

able Spode vase, eight and a half inches high, beautifully decorated in brilliant colors and with the typical scale design in gold, went for $65. Worcester and Lowestoft ware brought similar prices. The earthenware of Liverpool, with patriotic emblems, brought higher prices than the porcelains. Early salt glaze ware seemed as popular as the porcelain. Other pottery of the Whieldon school, with its famous

cauliflower and tortoise shell designs, fetched about the same price as the porcelain. In the early American pottery, Bennington ware, Jersey City ware from Henderson's Flint Stoneware Factory and from the Jersey City Pottery Company, were particularly sought.

Lustre ware of the early nineteenth century is virtually certain to bring high prices on the block. At the above sale there were two rare lustre pitchers, seven and one-half inches high, that went for $390, and $350, while others brought an average of $75. Pitchers and teapots are deemed more valuable than cups and saucers.

AMERICANA IN POTTERY

The American collector will find it interesting to specialize in that type of porcelain that is connected with the history and development of the United States. Prior to the Revolutionary War, little or no American subjects were used as designs on English porcelain. This, no doubt, was due to a lack of national feeling in the colonies, or rather, lack of recognition of such sentiment on the part of the English potters. Shortly after the war, however, the Liverpool potters, aware of the fervor of patriotism in the new country across the sea, began to decorate pottery with American designs.

Washington and Franklin were the best known American names in England, prior to 1800.

"Nothing in ceramic art proves that any other American had been heard of. The single exception was Josiah Wedgwood, who for some reason wholly unexplained, made a medallion head of William Franklin (son of Benjamin Franklin), who was the last Royalist governor of New Jersey, but not as well known here as a hundred other men. Probably his father's reputation in England led Wedgwood to produce his portrait. Possibly he ordered it himself, for Wedgwood made jasper portraits to order." [3]

After 1800 the English potters began to know more about American people and things. It is difficult, if at all possible, to date any English potteries with American decorations earlier than 1800, except Wedgwood, Enoch Wood, and Neale & Co. Porcelain with American decorations, either old or modern, is by no means common. A Niderviller group of Franklin and the French King is of the eighteenth century, as are the two services made for presentation to George Washington and Martha Washington by French officers of the Revolutionary Army.

Pottery was somewhat of a luxury in those days, when wealth was none too great in the new country. Even distinguished people were brought up to eat from wood or pewter. It is uncertain whether Washington had ever used porcelain until he received these presentation services.

Toward the end of the eighteenth and early

[3] "The China Hunters' Club," Harper & Brothers, 1878.

part of the nineteenth centuries, a porcelain of indisputably Chinese origin appeared with decorations of American subjects. These are believed to have been made to order near Canton, China. To quote again from the same authority: "I have seen a large punch-bowl, having in the bottom a portrait in colors, of an American gentleman wearing the decoration of the Cincinnati. Around him, thirteen large black rings interlinked in a circle, the name of the State in gold on each ring; then, on the interior side of the bowl, hanging from the border ornament, is the Cincinnati badge. The style of painting is Chinese, though the portrait is quite well done. The bowl was sold by a dealer in New York to a collector. A tea service of Chinese porcelain has the arms of the State of New York wretchedly painted in colors on each piece. Occasionally, one finds a cup with an American ship painted on it."

Pitchers have been found, bearing a map of the United States with figures of Washington and Liberty, dated 1804; on others a plan of the City of Washington, with legends above and below. After the death of Washington symbolical pictures appeared on pitchers and other pottery. (See illustration of Liverpool pitcher.) These enjoyed wide popularity and after the War of 1812 the English manufacturers took advantage of that fact to turn out pottery with American patriotic designs. New England afforded a good market for what is known as

Castleford ware,—in pottery and porcelain,—and while contempt was formerly expressed for these by collectors of the more aristocratic wares, many of the pieces were beautiful and they are highly prized to-day.

Mr. Gladstone was an enthusiastic collector of Leeds pottery, and according to Dr. George C. Williamson [4] he was able instantly to tell the genuine from other wares. He found real joy in passing from the turmoil of politics to the recreative quest of his hobby, by pursuing which he was able to renew his mental vigor for his main purpose in life.

[4] "Everybody's Book on Collecting."

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CASTEL DURANTE
Showing Renaissance Motifs—

FURNITURE

JUST how we happened on the little antique shop, we do not know. We were not aware that there were any shops of the kind in that part of the town. In fact, we had never seen the little blind alley before, although we had often been in the neighborhood. From the first we felt there was something unusual about the place. Physically it was the same as most of the little antique furniture stores: small, dirty and crowded with an incongruous assortment of old furniture, scrambled here and there, without regard to size, period or value. The only orderliness apparent was an almost uniform layer of dust over everything. The shop was different from any we had ever been in. The air was the same as in all of them, foul and musty, but there was something peculiar about the place which cannot be described. It caused an odd feeling to come over us the moment we had passed through the battered doorway.

As we sauntered about, glancing at this and

that relic of other days, we looked for the proprietor, but failed to find him. An exquisite Boulle cabinet caught our eye. It was a handsome specimen of fine ebony, richly and skilfully inlaid with tortoise shell and brass. We wanted to know the price, but not being able to find the shopkeeper, we called for him. Our voice sounded strange and loud in that quiet shop, but only a rat stirred, for all of it. No proprietor responded. We walked further toward the rear of the store, and noted another room on the left. "Perhaps," thought we, "the boss is in there," but, no, it was as devoid of human life as it was crammed with antiques. There was an aisle running through the middle of the room, between groups of furniture, down which we walked. When we had come to the far end we paused before a long mirror of striking and peculiar design. Clearly, it did not belong to any of the periods with which we were acquainted, and we had thought ourselves fairly competent to distinguish almost any type of furniture. Even the material from which the frame had been made did not seem familiar. We approached it more closely, and noted on the bottom the following inscription, in beautifully carved Gothic letters:

"Looking Glass, Looking Glass on the wall,
Who in this land is the fairest of all?"

"That's interesting," we mused, "it must be the magic mirror that Grimm wrote about."

"It is," said a sharp little voice in back of us.

We do not mind telling you that a thousand little ripples rolled up and down our spine at the sound of that voice. Turning around, we faced a wizened little old man, slowly rocking back and forth in one of those hideous mid-Victorian rocking chairs. We would have taken an oath that he was not there two minutes before, when we had walked down the aisle.

Strange proprietors have we seen in some of the old shops visited in our time, but none to compare with the little fellow before us. Had we not been in London, and were it not the twentieth century, we would have recognized him as a gnome, for that he was in appearance.

"Who are you?" we asked, "and how do you know that this is the Magic Mirror?"

He looked at us quizzically, then slowly in a soft, tho high-pitched voice, replied, "I am one of Snow White's seven dwarfs; that's how I know it's the Magic Mirror."

Now as we look back upon the adventure we wonder at our matter-of-fact demeanor, and that our collector's acquisitiveness had come so quickly to the surface, for notwithstanding the extraordinary situation, our first thought was to get possession of the Magic Mirror, the story of which had fascinated us so much in our childhood, and our first words were, "Will you sell it?"

"No, I won't sell it," snapped back the dwarf,

"and what is more, you cannot buy anything in this shop."

"Not buy anything in this shop," we repeated with surprise; "how do you make a living if you don't sell anything?"

"Never mind that," said the dwarf, "that is my affair. You mortals think that gold can buy anything, even the past, but you are mistaken. The present and the future may belong to you; these you may hold, buy or sell, but the past, no, that is gone, and is in the keeping of the immortals who neither buy nor sell. This is not the only magic mirror that exists; there are many such mirrors. Some are even possessed by mortals, and to those who are fortunate enough to have one is given the privilege of seeing the reflections of the past."

"And how may a mortal become the lucky possessor of a magic mirror?" we hesitantly inquired.

"Only by being first possessed with 'the true spirit of the past,' which is itself a gift of the Almighty," the dwarf replied.

"What can be seen in the Magic Mirror?" we asked.

"Look you," was his only reply.

The surface of the mirror became cloudy as he spoke these last two words. It seemed as tho invisible beings were blowing their breaths upon it. While this was occurring the dwarf said, "You are a collector of antique furniture, and a possessor of the true spirit of the

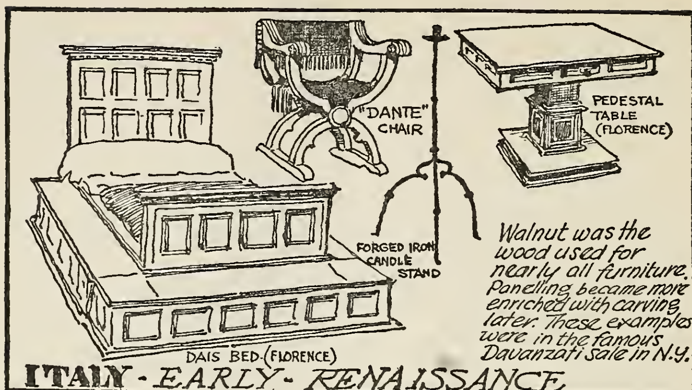
past; to you is given the privilege of looking into the Magic Mirror and seeing history reflected in the forms of old pieces of furniture, which are so dear to your heart."

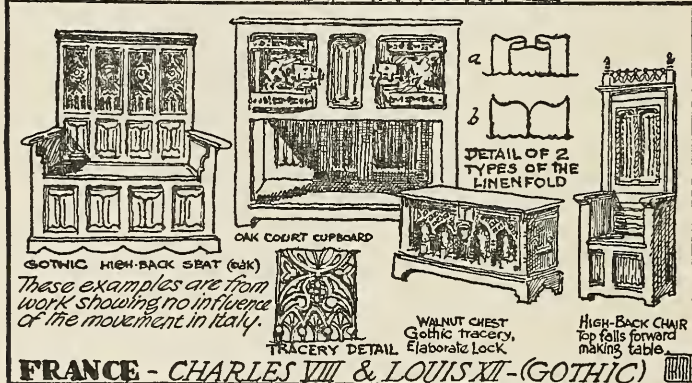
* * * * *

The historic traditions associated with old things lend them a charm. Sometimes the stories come down to us in written forms; sometimes our imagination must supply them, and happy indeed is he who can conjure up, as in a looking-glass, the contemporaneous associations of this or that bit of old furniture. In fact, each piece is in itself a mirror, reflecting the customs and manners of its original possessors more truly often than documents. The development of the historic styles of furniture is one full of the romance of the people who made history.

As the collecting of furniture is a hobby which must necessarily be linked with the furnishing and utilitarian purposes of the home, it is imperative that the collector be in possession of a fair knowledge of history and of the period styles in furniture.

Harold D. Eberlein says: "We may define 'style,' in its purest and representative form, as an average of closely related types, all of which combine certain common features and principles." It is also true that all evidences of any particular style of furniture resemble one another in every country "to prove their fundamental identity of origin."





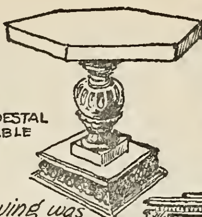
1450-1500

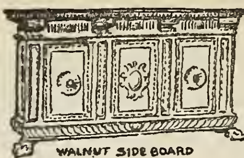
History is like a family tree. In order to understand, and, consequently, to appreciate one historical group, it is necessary to know its forebears. While no attempt has been made in this chapter to write a history of furniture, we have prepared plates showing, by the comparative

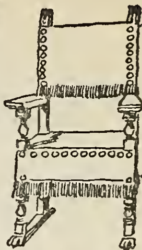
method, a few examples of the period furniture of Italy, France, England and America. It is to be regretted that space does not permit the inclusion of the Netherlands and Spain in this comparison, the former having played a particularly important rôle in the development of furniture.

Posterity owes the collector of anything a debt, of which the latter is rarely aware, the private collector being the custodian and progenitor of many of the finest collections in our public museums. Nothing that can be collected is so intimately woven with the past as antique furniture, and it is fortunate that, thanks to the interest and efforts of the collector, so much has been conserved for us to enjoy and live with.

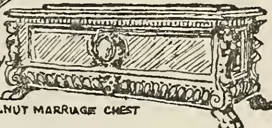
The skeptic may argue that, as modern furniture is generally more substantial, convenient, sanitary and less costly—and often, as with reproductions, as beautiful—why collect antiques? For an answer we would point out that the historical or human interest (as is the case with most objects collected), is the fundamental appeal. And there is the patina, which is only to be found on the genuine antique, for skilful as the maker of reproductions may be, he cannot rival the mellowing of time. To the hungry person a freshly laid hen's egg has decided advantages over a dinosaur's egg a million or more years old. A collector of eggs, however, unless faint for lack of food, would not hesitate in mak-





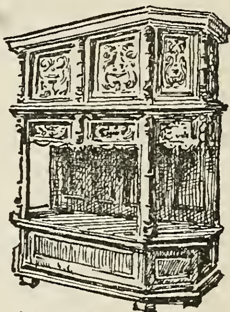


Carving was developed by skilled hands and became almost an essential feature



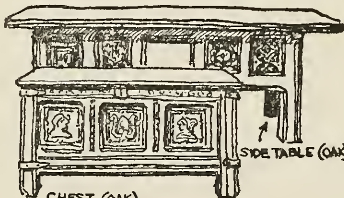
ITALY - - *RENAISSANCE*

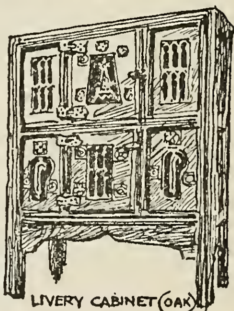
Generally Gothic in feeling but with Italian "Arabesques" in panels. All carving assumes jewelry-like workmanship. Principal wood used is oak, gradually giving way to walnut.



FRANCE - *FRANCIS I - RENAISSANCE*

Strongly Gothic; Tudor rose used. Heavy turning and carving coarse. Henry VIII (1509-1547) encouraged Italian workmen who started gradually to bring about a renaissance.





ENGLAND - *TUDOR* -

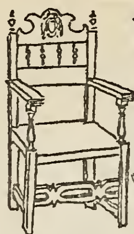
1500 - 1550

ing his choice, based upon less gastronomic grounds.

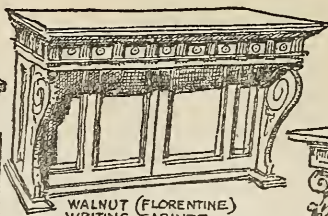
Who can regard an old piece, such as the child's chair shown on the plate of Colonial furniture, without a romantic voyage into the past. That particular piece is of hickory, hand-fashioned. The top front rung below the seat has been worn away by innumerable kicks of many generations of impatient feet. We can see the stout little legs twinkling vigorously, as their owners cried out with rage or screamed with delight, while, with stolid indifference, their fathers went about the rude business of laying the foundations of our country's government. Could any modern reproduction stir our imagination and conjure up memories in a like manner?

Every collector will have his individual leanings, and will pick up pieces according to his taste and pocketbook, but doubtless the possessor of limited means, and correspondingly limited quarters, will be guided in his acquisitiveness by utilitarian needs.

My heart beats fast whene'er I see, despite the world's hard knocks,
An iron chest of gothic days,—with complicated locks;
And breath within me shortens, as I touch with reverent care
A crimson-covered, finely carved, Italian Dante chair.



WALNUT, (UMBRIAN) ARMCHAIR



WALNUT (FLORENTINE) WRITING CABINET

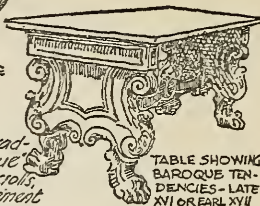
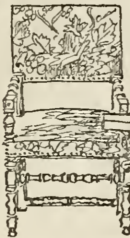


TABLE SHOWING BAROQUE TENDENCIES - LATE XVI OR EARL XVII

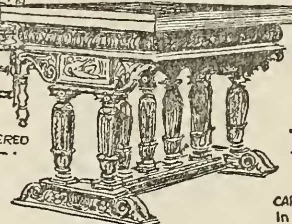
Refinement of classic detail gradually gave way to the "baroque" with heavier ornament, large scrolls, massive legs and aggrandisement of detail and scale

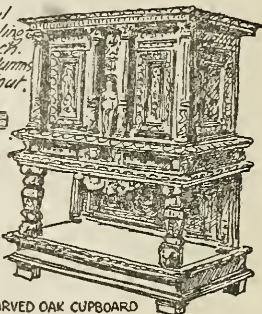
ITALY - *HIGH RENAISSANCE*

More originality but faithful adherence to the Italian feeling as understood by the French. Carving more elaborate. Columns more classical. Oak and walnut.



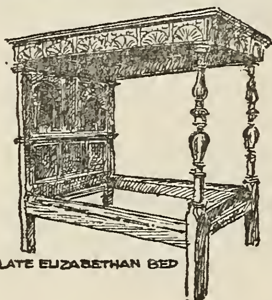
TAPESTRY COVERED ARMCHAIR.





CARVED OAK CUPBOARD In 2 pieces

FRANCE - *HENRY II - RENAISSANCE* - { *FRANCIS II, CHARLES IX, HENRY IV* }



LATE ELIZABETHAN BED

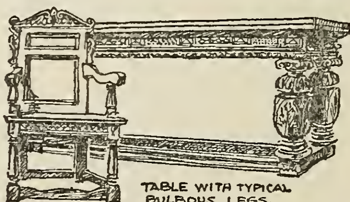
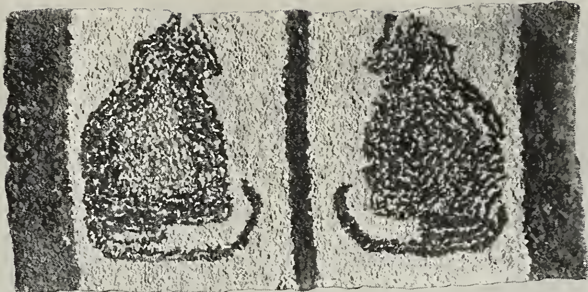


TABLE WITH TYPICAL BULBOUS LEGS.

Workmen bro't over from Italy influenced local artisans who imitated the style but stamped their personality on it. Coarse carving in low relief; bulbous legs & turnings; heavy mouldings and strapwork in panels characterize this style. Wood used: oak.

ENGLAND *ELIZABETHAN*

1550-1600



UPPER—HOOKED RUG: "TWO BLACK CATS"
LOWER—BATIK, "MORS JANUA EST," BY JOSEPHINE A. MEYER.

My eyes turn green with envy when I view my neighbor's prize,—
A beautiful François premier cab'net,—(much too big in size!)
And frankly,—many a time I've broken down and freely blubbered
When a plutocratic bidder bought a William and Mary cupboard!
And,—Oh,—I recollect one day I wasn't even able
To pay a paltry ninety-five for a Louis Quatorze table.

But do you think I'd ever swap my homely picturesque
Old baby chair, or Chippendale mahogany block-front desk,—
Or comb-back Windsor,—or chest-on-chest,—the lovely things I've got
For those glorious European pieces?—Absolutely not!

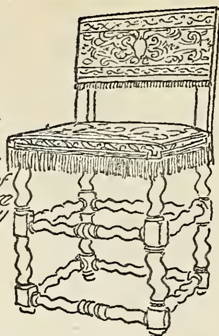
Sir James Yoxall, in his book on collecting, wisely says, "The true way for people, not wealthy, to learn collecting and enjoy it, is to look out for small, typical pieces which may still be found and purchased for a small price. So I urge the reader to form his opinion as to what is a 'collectors' piece' from his own information, and not from what a superficially informed dealer may say. It is certain, as the costly 'museum pieces' and 'collectors' pieces' become more and more absorbed into museums, and dearer at auc-

tions, the smaller typical pieces which are still collectible to-day will rise in pecuniary value."

DESKS

The desk was a grandchild of that prolific progenitor of furniture, the chest. The latter, in early days, served many purposes:—trunk, seat, storage cupboard and even table. The early chests had neither feet nor base. Later the bottom was raised above the floor by one or the other of these means to protect it from dampness and vermin. Following this, the "two-story" chest,—one above the other, was conceived. From this type there was evolved the chest with a drawer below,—then with two, three and even more drawers and finally all drawers—whence the name "chest of drawers." The chest itself sometimes instead of opening on top opened at the side, forming cupboards with doors. Then the front was made slightly sloping and from this form was developed the desk in use about 1700, being the ordinary box desk, resting on a chest of drawers and often known as "Scrutoires." The sloping front opened on hinges. They often had many cupboards, and sometimes secret drawers. Imagine the joy of finding one of these old desks, and discovering its secret compartments, and then—thrill upon thrill!—bringing to light old and interesting letters and keepsakes! Such finds are not uncommon, and are worth all the years of quest.

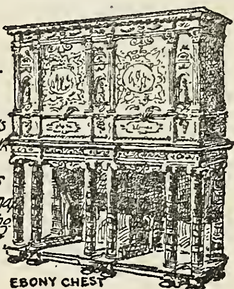
After the middle of the XVII century, Italian furniture took it's cue from France. Until the first quarter of the XVIII century no noteworthy pieces were made typical of Italy. However, Venetian painted furniture of the XVIII century are charming and well worth studying.



ITALY - *RENAISSANCE - DECADENT*

WALNUT CHAIR COVERED WITH GROS-POINT.
(Note stretcher & baluster legs & frontal stretcher.)

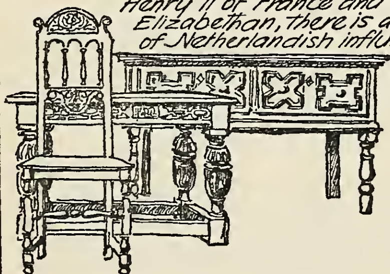
From the end of the reign of Henry IV, France led all nations in the design of furniture. The style of Louis XIII is a transition from the copying days to those of creative work and we see under the next king, Louis XIV, a full, new national style, regal as the king. Holland's influence at this time was powerful in the arts.



EBONY CHEST

FRANCE - *HENRY IV - & LOUIS XIII - RENAISSANCE*

While reminiscent of the style of Henry II of France and of the Elizabethan, there is a note of Netherlandish influence.



Typical Jacobean Bulbous table leg.

ENGLAND - *JACOBEAN -*

1600-1650

The next hundred years or so saw the evolution of the desk into the beautiful secretaire and bureau desk, with its cabinets above for books or old china. It is fascinating to trace the metamorphosis from the primitive old pine or oak chest to these sophisticated cabinets of valuable inlaid woods and delicate workmanship of the Sheraton period.

We cannot leave the subject of chests without quoting an anonymous article from the magazine "Antiques" of August, 1922, where the author writes of a Dutch treasure chest belonging to one John Hinton, evidently a sea captain, in which was found among other things, a note book of the year 1799-1800 in Hinton's own handwriting, as well as his original spelling. These are his rules concerning sailors:—

"SAILORS"

1

"Give them thar alowance of Rum, Shugger or Mollassis & Coff & etc.

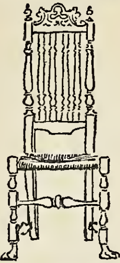
2

"Dont lett them sleep in the waste sails. Lett them finde thar own Beding.

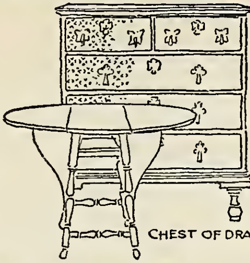
3

"Dont ceep them in your cabin out and in nor alow them to come every now & then in the cabin nor state roome nor in among provisions.

It is interesting to compare the furniture of the colonies with that of the French of the time.

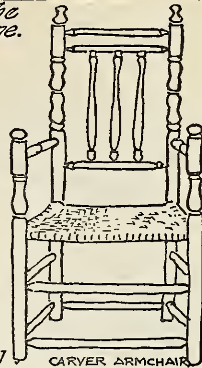


BANNISTER-BACK CHAIR



BUTTERFLY TABLE

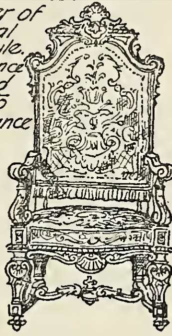
CHEST OF DRAWERS

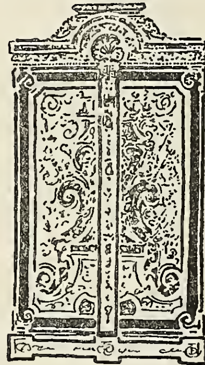


CARVER ARMCHAIR

AMERICA · *EARLY · COLONIAL*

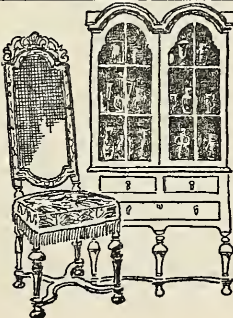
The full flower of the national French style. Prëeminence in art moved frome Italy to France

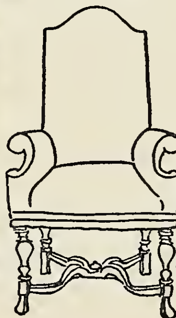




BOULLE CABINET

FRANCE · *LOUIS · XIV* ·





"Spanish" Foot

William of Orange brot over a Dutch fondness for its art, easily seen reflected in the style of his reign.

Table Leg, showing typical turnings.

ENGLAND · *WILLIAM · & · MARY* ·

1650-1700

4

"Dont lett them have the locker all ways full of could vittles in thare hands to eat every minute when thay please but allway give them three meels every day, and good.

5

"Dont lett them never thro away eny kind of damiged provisions them selves lett the mate do it, or cap'n in port, and never thro away Bad provisions at sea without thay stink very bad Sometimes thay have saved piples lives when in distress.

6

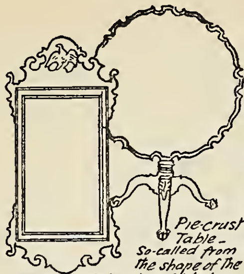
"Bye all ways good ship provisions never bye Bad if cheep becos Bad provisions is all ways thrown over bord half when sailors is eating & spiles the sooner & is apt to make sailors seck then weeke and docttorin is all the loss of ships."

Farther on the old sea dog philosophizes thus:

"May every Brother have Life Love & Leberty."
"May we never condem that in a Brother wich we would pardon in ourselves."
"Love with out Fear & Life with out Care."
"Days of Ease & Nights of Plassure the freand we love & the Whoman we dare trust."

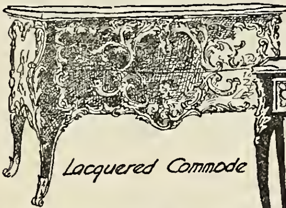
CHAIRS

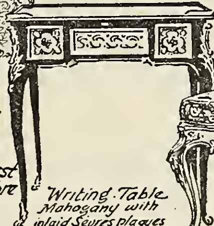
Turning to the subject of chairs, we admit of a certain weakness for Windsors. They may still be picked up here and there in the country for small sums but they are fast becoming scarce. Windsor chairs originated in England in the

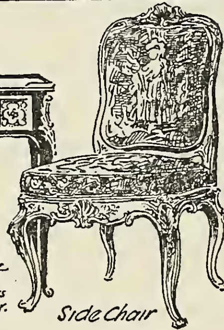


There is a charm about this style that appeals to the American.- Compare with the style of the French of the time.

AMERICA *HIGH · COLONIAL*



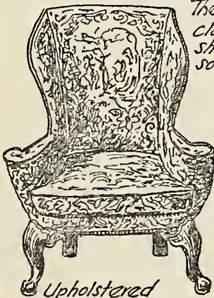


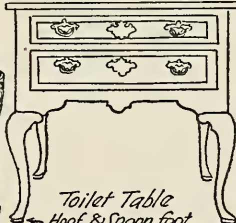


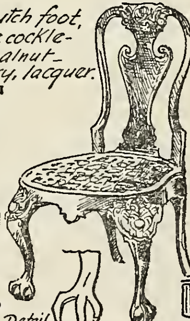
This style marks the finest workmanship of any before or since. The carving and metal mounting were exquisite. The importation of Chinese porcelain had a noticeable effect on the designs.

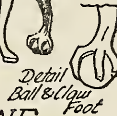
FRANCE - *LOUIS · XV ·*

The leg usually cabriole, Dutch foot, claw-and-ball. Simply carve cockle-shells and leaves. Wood, walnut_ sometimes inlay, marquetry, lacquer.









ENGLAND · *QUEEN ANNE*

1700 ~ 1750

first quarter of the eighteenth century and appeared in the Colonies a few years later. They were so comfortable and lent themselves so well to the needs of the Colonists that they became very popular. The American Windsors were more graceful than those made in the mother country, but were never made in the elegant woods. They usually were a combination of two or more woods such as hickory, oak, ash, maple or beech and painted, generally some shade of green, but sometimes black, red, or yellow. There are many different forms of Windsor chairs: hoop-back, loop-back, comb-back, fan-back and others. At recent sales in New York, fine specimens of Windsor chairs fetched from $100 to $250 each.

Another fascinating early American chair is known as the banister-back. These appeared in England and America about 1675, and were called split-back chairs because the turned balusters (three to five in number), which formed the back, were split. They were placed with the smooth side towards the sitter. They generally showed the Spanish foot, and a more or less elaborately carved top with either a turned front-brace, as shown in the illustration, or a carved under-brace. These chairs gradually gave way to the single splat-back of the Queen Anne type. The banister-back chair illustrated brought $380 at an important auction in New York.

Another type of Colonial chair is known as the ladder-back or slat-back.

BUYING ANTIQUES

The forgery bugaboo looms large on the horizon of the timid adventurer in this field, wherefore a few words of advice will not be amiss. A splendid rule for the beginner to follow would be to buy only that which would not cost in excess of an amount equal to what he would have to pay for a good reproduction to-day or first carefully studying that particular branch of his hobby or consulting an expert. We would urge the study of authentic pieces in the museums and if the collector shows a sincere interest in the subject, the curator will be of valuable assistance. He is almost invariably a delightful person to know. If practical, it would be helpful to visit a modern furniture factory where the finest pieces are turned out. In this way, an idea of the limitations of the past can be gained and the construction of furniture generally better understood.

The safest way to buy genuine antiques is to obtain them from some reliable and responsible dealer who is willing to stand back of his sale with a written guarantee. Such a method, however, is scorned by the true collector, for, besides involving the payment of all a piece is worth, it lacks the sporting appeal of the quest.

There are "don'ts" by the score in the collect-

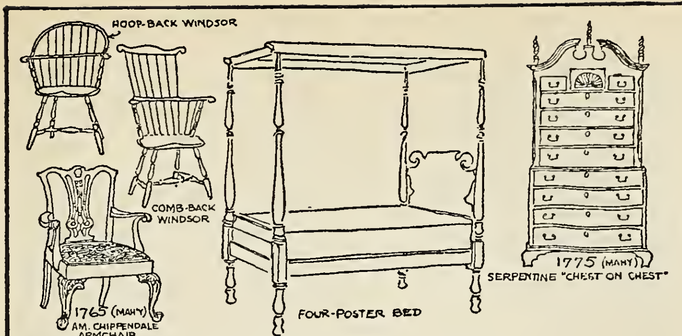
ing of antique furniture, many of which are too obvious to state. Most of the "don'ts," however, are of such a nature as to be out of place in any book not meant to be an exhaustive treatise upon the subject. Unless due allowance be made in the purchase price to cover the cost of restoration, the collector would do well to avoid acquiring any piece that is shaky, weak or impractical to use in its "as is" condition. When acquiring a new piece, it is well to have in mind just how it will fit in the general scheme of one's furnishing.

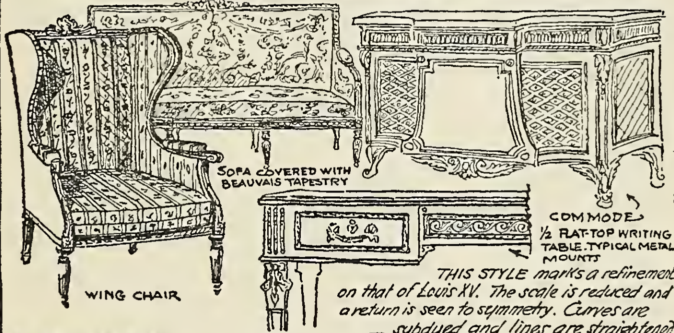
We heartily subscribe to the advice of that experienced collector, Sir James Yoxall, who says: "I once saw four ladder-back Jacobean chairs, of hard yellow wood painted with flowers, going for a sovereign the four, but they would not have been cheap to me, because I could not house them; they would have 'sworn at' (as the French say) everything else in any room in which I could have put them."

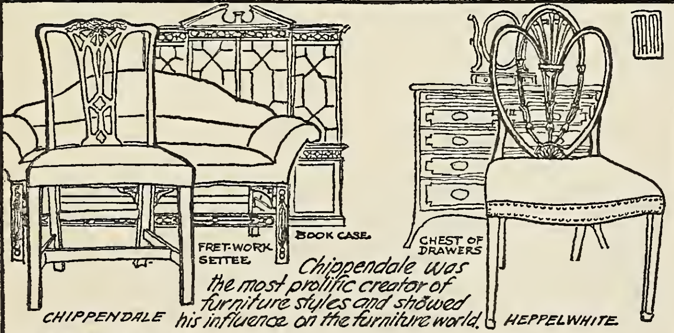
It frequently happens that in buying a piece in which there are drawers the collector neglects to investigate their working. Drawers that cannot be easily operated are a continuous source of annoyance.

WORMHOLES

A word as to wormholes,—we recall one occasion when our attention was called by the owner, a self-made man of recently acquired







1750-1800

means, to the seventeenth century Italian armchair in which we were seated. He pointed with ill-concealed pride to the small holes in the legs and arms and assured us with pathetic earnestness that they were genuine wormholes. "That chair," he concluded, "cost me two thousand dollars." While we thought this was an exorbitant price to pay for wormholes,—particularly when we consider how costly it is to rid a piece of this destructive pest,—we did not have the courage to tell the poor millionaire how badly he had been taken in. Wormholes are progressive, and can lead to the weakening, if not ultimate destruction of a piece, once it is infested.

While it is true that the possessor of knowledge and good taste in furnishing will find no hobby more satisfying and permanently pleasurable, as well as sound from the investment standpoint, it should be remembered that there is nothing collectible where ignorance and bad taste can make such a conspicuous showing as with antique furniture,—unless it be with modern furnishings.

BOULLE

At the threshold of every new field of endeavor the beginner is apt to be impressed with the multitude of names of those of whom he has only a vague knowledge. Some of these, however, are so important as to make it necessary to

learn their connection. Thus, synonymous with the most famous pieces of furniture, are the names of their makers.

In France the outstanding figure was Andre Charles Boulle. Boulle was born in 1642, and grew up in an atmosphere of cabinet makers. At thirty he was admitted to *logement* (quarters) in the Louvre, a privilege accorded by the King, Louis XIV. Boulle was an ardent collector of art objects, and a tireless student, and his work is renowned for the superior craftsmanship and exquisite taste he displayed in the use of inlay of various materials, including shell, mother-of-pearl, metal, etc. His cabinets were generally of ebony,—black,—with a contrasting inlay, charmingly delicate, if somewhat severe. In 1720 a disastrous conflagration in the Louvre destroyed all of his valuable collections, together with his unfinished stock of furniture, and left him penniless. He was seventy-eight years of age, and his improvidence in living, in spite of the generous assistance of the King, finally landed him in Debtors' Prison five years later. His death occurred in 1732.

PERCIER & FONTAINE

Another name immortally linked with furniture is that of the great architectural combination, Percier & Fontaine. They carried on the profession of architecture in Paris, designing many of the finest works of their time, in the

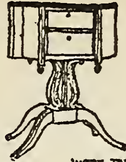
style which we have come to know as Empire. They worked altogether in classic motifs, and renovated many of the palaces for Napoleon. They put out a number of valuable books on architecture and decoration, and were principally responsible for the best designs of the period. Edward R. Smith writes:

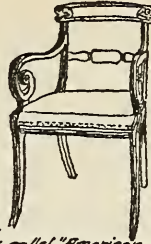
"The furniture of Percier & Fontaine resembles the design of Heppelwhite more closely than it does that of any other cabinetmaker . . . There is in both much of the same firmness of line and finesse of proportion. The French work lacks the peculiar and intimate charm of the English designers, but it is better organized, more scholarly, and more important in its volume and quality."

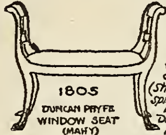
In England there are four names that stand out more prominently than any others. Altho they were not originators, their names have been bestowed upon the individual styles of their time. We refer to Chippendale, Heppelwhite, Sheraton and Adam.

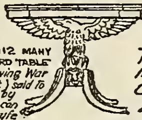
CHIPPENDALE

The first of these, Thomas Chippendale, who was born in the early part of the eighteenth century, is the most important. He was the first designer to impress his personality upon his work. His book, "The Gentlemen's and Cabinetmakers' Directory," had a profound influence upon his contemporaries, as well as his success-



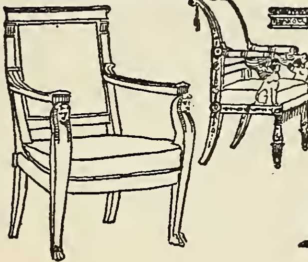


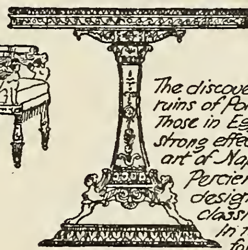




This style is often miscalled "Empire-Colonial"– It can be called "American Empire"–Note how the new country is quite abreast of its two great art-creating contemporaries.

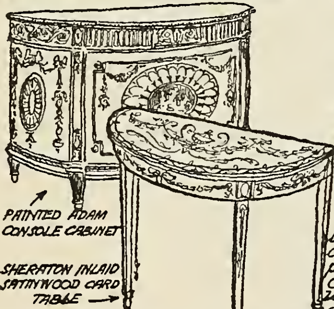
AMERICA *EARLY REPUBLIC*

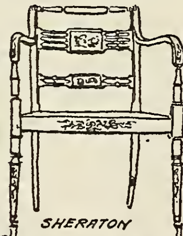




The discovery of the ruins of Pompeii and those in Egypt had a strong effect on the art of Napoleon's time. Percier & Fontaine designed along classic lines in their work for the Emperor. Delicate metal mounting in fine mahogany surfaces; sphinx; columns; honeysuckle, Roman eagle; wreaths; torches; etc; characterize this style

FRANCE · *EMPIRE*





Both Sheraton and the Adams properly belong to the end of the XVIII century but their work overlapped well into the XIX. Satinwood; painted decoration and inlay are frequent.

ENGLAND – *ADAM AND SHERATON*

1800 – 1825

ors. He invented several distinctive styles, among which was the so-called "Chinese Chippendale." The principal characteristics of his style are the ribbon-back chairs, smooth carvings and bands of fretwork.

HEPPELWHITE

George Heppelwhite at first followed in the footsteps of Chippendale, and indeed he published a book known as "The Cabinetmaker and Upholsterer's Guide." Heppelwhite's designs, perhaps feeling the influence of the times, were more classical than those of Chippendale. Characteristic features of Heppelwhite's work were the carving, in which the honeysuckle and wheat ear are shown, and it was he who first produced the shield-back chairs.

SHERATON

Thomas Sheraton was the Boulle of English furniture. His life recalls the sad existence of Meryon, the French etcher. Like the Heppelwhite and other contemporaneous styles, Sheraton style followed classic lines. His best work is simple, even severe, depending almost entirely upon inlay for ornamentation. He was the first to employ satinwood to any extent in furniture.

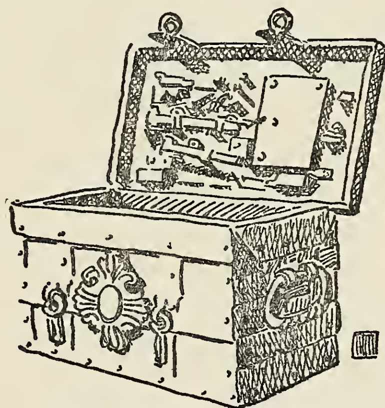
ADAM

The Adam style is as well known in architecture as it is in furniture. Robert and James

Adam practised architecture in London and produced a style for which they claimed originality. Their use of composition ornamentation made it possible to show ornaments in relief, without the expense of carving. Their style has a charm and individuality of its own. They worked along severely classic lines.

AMERICAN INDIVIDUALISTS

In America the great names of the early republic are those of William Savery of Philadelphia, Duncan Phyfe of New York, and John Goddart of Newport. All three of these worked along lines strikingly similar to those of the English individualists, but there are telltale characteristics that identify them. Their workmanship was beyond reproach.



TREASURE CHEST OF CAPT. HINTON

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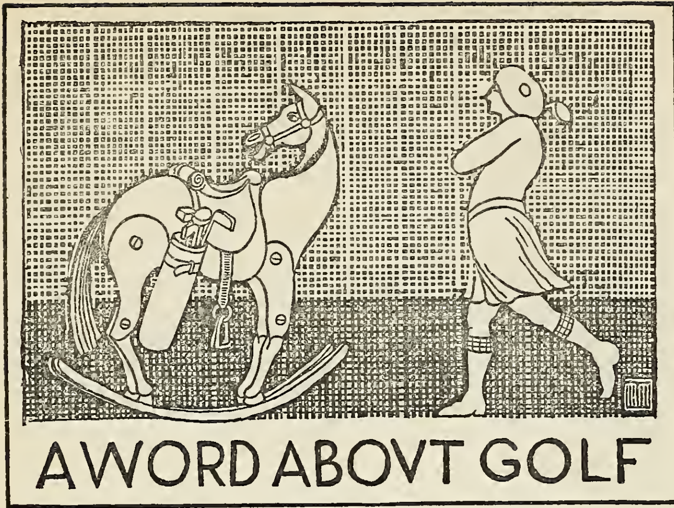

THIS chapter is not devoted to the "how" of playing golf, but rather to the "why" of it. The "royal and ancient game" has a devastating effect on its devotees, and when one has been stricken with the fever of golf there is no telling what the results may be. An attack of golf fever will often leave its victim completely devoid of the ability to worry. The man who boasts that he hasn't taken a vacation for twenty years frequently succumbs to golf, and the effect is such that he proudly announces to his friends that he hasn't left his office later than two o'clock during the entire golf season.

GOLF IN THE FOURTEENTH CENTURY

Golf was introduced into Scotland from Holland, probably in the latter part of the fourteenth century. About the middle of the fifteenth century golf was seriously competing with the principal industry of Scotland, which at that time was fighting, for it is recorded that the Scottish parliament came to the conclusion that golf was interfering with the defense of the country and so prohibited the playing of the game. Prohibition was the necessary element needed to add even more zest to the game, and consequently after the edict of James IV of Scotland, prohibiting the playing of golf, it became a more popular sport. Although not recorded by history, it is thought that the surreptitious carrying on of golf by the Scotch in the fifteenth century was the origin of the surreptitious carrying of Scotch by the golfers in the twentieth century. It *is* recorded, however, that King James IV, author of the anti-golf edict, was its foremost violator, illustrating a tendency that still survives. Mrs. John King van Rensselaer, an authority on the history of New York, tells us that golf was introduced into New York in the seventeenth century by one Jack Spratt (the actual hero of the nursery rhyme). The game became popular and was played on the old Bowling Green and on lower Broadway. Governor Peter Stuyvesant had to prohibit the game for it was obstructing traffic.

A WORD ABOUT GOLF

THE APPEAL OF GOLF

The appeal of golf is not difficult to explain, although a mere description of the game does not show reason for its popularity. The bare facts of the game itself have kept many people from taking up the sport. That golf calls into play almost every human instinct has much to do with its popularity. Golf combines pleasant physical out-of-door exercise with companionship, keenness of competition, and physical and mental accuracy. There is a camaraderie about a golf club that cannot be found elsewhere, and there is the fascinating courtesy of the course, the honest consideration of the other fellow, that adds to the charm of the game. Golf is, in truth, a game for gentlefolk, yet, none the less, it is a game for the red-blooded man and woman.

THE GAME FOR YOUTH AND AGE

Many games there are that fascinate youth, but they must be abandoned even before middle age. Not so with golf, a popular game in the colleges and still popular among the octogenarians who play often with one foot in the grave (a difficult "stance"). Speaking of graves, several of the golf courses in China, which are principally played on by the Americans and English, are laid out on old burial grounds. As the Chinese bury their dead in extremely shal-

low graves, many a weird "lie" has been recorded on these courses.

GOLF AND CHARACTER

We have always felt that any game or activity which brought out a man's character is worth while. There is in the game of golf, something so vital that one need but play with a man a few times accurately to summarize his character. Note his demeanor in the face of adversity; how he carries himself in victory; what his attitude is when off his game; how he keeps his score; his consideration of other players; how he plays a difficult shot, and many other details of the game which are indicative of how he meets similar situations in life.

Perhaps it is because golf holds so many analogies to life that it is the most popular of all outdoor games. That it may be so considered is clearly indicated by the fact that there are at the present time over 2,500 golf clubs in the United States, at which more than two million people play.

ANTIDOTE FOR WORRY

There is no other game, accessible to so great a number of people, that will completely lift one out of the rut of everyday life. The most serious worries and troubles are forgotten on the links. There is something about the game of

golf that permits no extraneous matter to intrude, and at the end of the game, though one's body may be somewhat wearied, the mind is completely renovated and refreshed.

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"GOLF OR BANDY-BALL" (FROM AN OLD MS. IN THE DOV. COLLECT.)

BUSILY spinning at her handmade clock-wheel, drawing the skeins of wool from the small pine chest which stands at her side, the Colonial house-mother, clad in homespun frock, looks up occasionally to smile at the diligence of her young companion on the other side of the glowing hearth. There sits a girl of eleven, who, with puckering brow, earnestly embroiders onto a bit of this same hand-woven material, not only the designs revealed in the pattern book, but much of the life of her limited environment.

SAMPLERS

We of America are prone to look upon samplers as peculiarly "Colonial," perhaps because they fit in so graciously with the naïve furnish-

ings of that period. In truth, however, they were merely transplanted along with other household "manners and customs." In the Victoria and Albert Museum in London, the earliest dated sampler is 1643,—and we cannot help wondering if this elaborate piece, done in satin, cross-stitched and decorated with cut and drawn-work, and filled with needle-point stitches, could have been the work of such youthful fingers as later, in England and in other countries, recorded their ages on these fascinating documents.

The earliest samplers were mostly embroidered in floral and geometric designs; the Indian pink, the honeysuckle, the rose, pineapple, acorns, and strawberries being favorite subjects. Later, trees, birds, butterflies and animal life in various forms were introduced. Of course, the alphabet and numerals played important parts in this student work, and samplers of the time of the French Revolution show exquisitely worked maps enclosed in elaborate borders. Houses and figures became favorite subjects later,—the borders grew wider and more ornate as the sampler became more and more a piece for display rather than a pattern primer. Undated samplers can be placed fairly accurately by their style of ornament, by the type of material upon which they were worked, and by the kinds of stitches used. Before the middle of the eighteenth century, there were no borders. The earliest backgrounds were handmade white linens and some-

times silks, yellow linen being generally identified with the early eighteenth century. Canvas came into use later and was the most favored material upon which samplers were worked. Early stitches were known as "bird's-eye" and "satin" stitches, while marking and darning stitches and what we know as cross-stitch and petit-point, were used in the eighteenth and nineteenth centuries. There were also many openwork and drawnwork stitches used, and some of the earliest samplers had inserts of lace.

It was due to this craze for needlework, coupled with the scarcity and costliness of books of patterns, that the designs were copied onto pieces of materials, thus preserving to us so many of the quaint conceits of our forefathers.

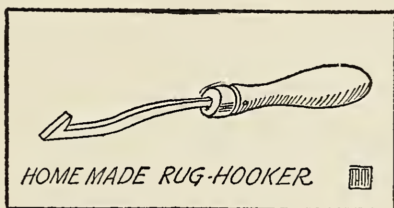
Samplers often have the name and age of their maker, as well as the locality in which they were made, and it is on account of their personal quality that they have been cherished in families along with the portraits and the family tree. However, with the passing of families, samplers of great historical interest are gradually finding their way into the markets and are being eagerly sought, which is natural since the collecting of samplers, particularly those of American origin, has, within the last few years, become so popular in this country that it is fast taking rank as an important hobby.

It is doubtful if the art of the sampler will ever be revived, since the conditions under which they were first made have passed with

the passing scarcity of books,—but the beautiful patterns and stitches which they preserve for us are inspirations for our present day needlework. Gros-point and petit-point, which nimble fingers make to-day, are heirlooms of this finger expression of those who made our samplers.

HOOKED RUGS

Ten years ago "hooked rug" was an absolutely meaningless name to us, but when our



HOME MADE RUG-HOOKER

eyes lit upon a rather soiled, raggy-looking piece with two crudely drawn black cats upon a grayish background, we were fascinated. Somehow the link between it and our Colonial bedroom seemed established. "Well, it is certainly worth trying out for a dollar and a half," we thought and immediately made it our possession. It was coarsely executed, and the patched canvas lining attested to its age. That, however, at the time was a condition rather to be borne with than to be congratulated upon. To-day, the hooked rug is no longer a mystery, and our collection now has many more beautiful and sophis-

ticated pieces, but none with quite the simple charm of The Two Black Cats.

It is unfortunate that the exquisite color harmony cannot be reproduced in the photograph of the large hooked rug. This was the handiwork of Dorothea Litzinger, the well-known painter of flower canvases, during odd moments in her busy life. It is difficult to realize that a rug of such dimensions, seven by eleven feet, could be accomplished by spasmodic working in a period of only one year. However, there were many preliminary months of collecting of old garments and materials of various textures; cotton, silk, wool and linen, which had to be cut or torn into strips, and some of them dyed, to form this artistic pattern in color. The quasi-symmetrical irregularity, and a certain unevenness in the hooking, has helped to give this much of the naïve charm of the early hooked rugs.

The design of this rug was first drawn in black oil paint on the burlap base. The hooking was started at the center and worked toward the edges, without a frame,—"over the knee" as the artist explained. For the hooking, she used a home-made instrument fashioned from a knitting machine jack which was filed at the hook to secure a more substantial grip on the material. The other end was ground and sharpened and forced into an old tool-handle, secured with a clinch-pin. (See illustration, page 249.)

HOW TO MAKE HOOKED RUGS

Hooked rugs are not difficult to make, but they require patience. They can be made as was the one described above "over the knee," but the more orthodox custom is to employ a wooden frame to which the burlap foundation is firmly fastened. In any case it is well to allow for a two-inch hem all around the burlap, and the hemming should be done before starting the rug, as it strengthens the whole base. Lines are drawn down the center lengthwise and across, and the pattern is next drawn in with chalk or charcoal. To prevent the lines from being lost by rubbing they are painted over with bluing in water to which gum or mucilage is added,—or they can be painted with oil or ink color. The rags are prepared by cutting them into strips about an inch or so wide, dependent upon the thickness of the material; those that need special color are dyed, and the rug is started. When a frame is used, it is better to start from the outer edges and work toward the center. It is advisable to do the outlining before filling in, as it makes the work easier. After selecting the proper color rag it is held beneath the burlap and the hook is thrust through the mesh, engaging the rag strip and pulling it through, forming a loop. It is hardly necessary to remind the "hooker" to hold onto the end on the underside to prevent "slipping." The hook is next thrust through the mesh two or more strands away, ac-

cording to the thickness of the materials, and the process above described repeated. The loops should be pulled through not more than a half inch and generally about three-eighths is allowed,—but every effort should be made to keep the loops of practically a uniform length. It would be well for the beginner to curb her ambition and to start out by making a small square which could be used advantageously as a cushion or foot-stool cover. The hooking goes much more quickly as one becomes accustomed to it, and the large pieces should accordingly be made only after sufficient experience is had with the smaller ones.

The craze for hooked rugs has taken such a hold upon the public that the authors of "The Collector's Whatnot," were inspired to write the following amusing dialogue in their chapter entitled "Hints for buying from original sources." In this same book published by Houghton, Mifflin Co., are many other such delicious bits:

(*Mr. B., a Chicago collector of hooked rugs, has observed a fine specimen hanging on a clothes-line beside a New Hampshire farmhouse. Mr. B. descends from his car and approaches the proprietor, who is sawing wood near the kitchen wing.*)

Mr. B.: Good morning. I stopped to inquire if you have a calf for sale.

Peasant: Did ye?

Mr. B.: I am willing to pay quite a good price for an original she-calf in fair condition.

Peasant: Be ye?

Mr. B.: I would pay $350 for a really excellent she-calf.

Peasant: Let's see the money.

Mr. B. (displaying the sum mentioned): But *have* you such a calf?

Peasant: Yes, but I wouldn't never sell her under $355.

Mr. B.: Done with you at $355! Go fetch her. But stay,—I have nothing to wrap her in.

Peasant: What you want to wrap her for?

Mr. B. (laughing graciously): It is customary in the city to wrap all purchased articles, and besides she might take cold. Let me see what you have to wrap this she-calf in. Ah! There is a worthless old hooked rug. *That* will do to wrap my purchase in.

Peasant: Well, I don't know. That there rug's wuth somethin'. I'll have to charge ye two dollars extry for the rug.

Mr. B. (restraining his excitement, handing the peasant $2.00 and removing the rug from the clothes-line): Very well. I hereby purchase the rug; and upon second thought, I find I have no definitely pressing need for a she-calf at this time. Good morning and the best of luck to you!

The popularity of the hooked rug as well as the braided rug has created such a demand that the making of them has developed into an industry. It is obvious, however, that there is a sentimental value that attaches itself to the home-made article that can never be supplanted by the commercial variety.

BATIKS

"What are they, anyhow?" was the amazed and amazing question of a friend of ours, after gazing upon a display of batiks in a shop window in the Greenwich Village section,—and had not an explanation of the process gone along with *our* first introduction to batiks some years ago, we are afraid that we would have been equally as mystified.

Batiks came to us from Java, in the Dutch East Indies. A batik is a decoratively treated material, done in wax resist by printing or dyeing. To quote Amy Mali Hicks: "Batik-making is a craft almost free from technical difficulties, and for this reason is especially adapted to the use of the amateur craftsman. There is indeed scarcely another method by which so many useful and beautiful objects of home decoration can be as easily made."

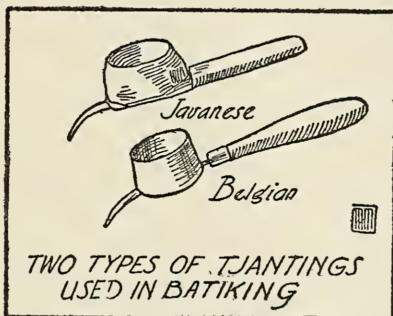
The batik illustrated was done without previous training in this branch of art by the late Josephine A. Meyer, known chiefly as a writer and as a founder of the Washington Square Players. Her versatility and artistic ability led her into the harboring of many other interests, but she has left numerous specimens of batiks to attest to her skill in design and craftsmanship.

HOW TO MAKE BATIKS

The charm of the batik lies principally in the suggestive softness of the material and the play

of light on the folds when properly hung. It is, therefore, desirable to use old, washed-out cottons, silks or linens, which should be thoroughly cleansed of all foreign substances and shrunk by boiling for ten minutes. When dry the design is marked off with a brush or with a tjanting, a tool which consists of a small cup with a spout set at right angles to a handle. (See illustration.)

The cup is filled with melted beeswax, some-



TWO TYPES OF TJANTINGS USED IN BATIKING

times mixed with paraffin, and heated at intervals to keep the wax liquid. The design may also be stenciled on the material. After the design has been drawn in with the wax, and painted where it is desired that the next bath of dye shall *not* penetrate, the material is carefully immersed in a warm bath containing the dye. The temperature of the bath should be neither too hot nor too cold, for fear of either melting the wax or cracking it and causing it to separate from the base. The material is next removed from the

bath, dried by laying between two old towels to remove the surplus liquid and prevent running, and then hung up to air. When dry the wax is removed, and rewaxed where the next dye bath must not penetrate.

To remove the wax it is necessary to wash thoroughly in gasoline or to iron out, but before the next application of wax it must again be absolutely dry, or the wax will spread. To obtain green two dippings suffice: one blue and one yellow. This will yield a three-color batik, or four colors if white is counted. Orange is obtained by mixing red and yellow; purple by mixing red and blue. The principal thing to remember is to protect with a coating of wax all parts where the next color is not to penetrate. In order to obtain a soft effect it is important that the final washing in gasoline be thorough, leaving no traces of the wax. Failure to wash the wax out will result in a tissue-papery look so undesirable to the connoisseur.

Crackle is obtained by wrinkling the waxed material, prior to immersion in the dye bath. "Tied-and-dyed" designs are simple and involve merely the twisting of the material and firmly fastening with thread or elastic band, dipping in the dye, and drying. Sometimes sections of the material are tied over a marble or pebble after the spot to be thus reserved has been systematically marked on the material. This last is not batiking in the true sense, as it

involves no wax reservation; but it is useful, and we know of no method to compete with it for hangings and bed covers made out of cheap unbleached muslin, nor is the procedure dependent on any knowledge of drawing.

QUILTS

To tell the story of patchwork would be to revive the history of ancient times, for this kind of work was used by the Pharaohs in Egypt, and has been so consistently "true to type" through the ages that the appliqué to be found on the cushions and the hangings made by the Egyptians to-day are almost identical with those found in tombs dating back thirty centuries or more. This appliqué or patchwork was carried from Syria into western Europe by the returning crusaders, and in combination with embroidery became one of the favorite adornments of church and vestments. The plentiful examples of the appliqué work that have survived the ravages of time, and the many ways in which they were used cause us to marvel that in periods of such limited knowledge and conveniences there should have been a rather general devotion to these gentle arts.

Since the bed was almost as much a thing of state as was a throne, its equipment of hangings and coverlets were of the most elaborate kind. It would seem that some of this veneration for the stately bed had descended to the hut of the

Colonial settlers, for the adorning of their quilts and bed hangings was an important feature in their primitive lives, and the love for the beautiful and ornate was stronger even than their Puritan thrift. However, it was the vital necessity for thrift that evolved the intricate patchwork quilt. So utilitarian were they, and so interwoven in their making with all the homely virtues and the social life of the Colonies, that the history of the quilt cannot help but reveal more of the heart throbs of their patient makers than anything else that has come down to us. The arts of quilting and patchwork were so assiduously cultivated that they reached a rare perfection, and there are many of these interesting specimens extant for us to admire and to wonder over.

But quilt-making is by no means a lost art, for it is pursued to-day in much the same fashion as it was in the days of our great-great-grandmothers. Many an old woman in some remote section of the Blue Ridge Mountains can count scores of quilts, fashioned by her own hands, which she preserves with as much pride as does the rich man his priceless tapestries.

An old silk quilt, pieced in star pattern, is folded at the foot of our Colonial bed, on which is a coverlet of unbleached and tufted muslin, known as candlewick. We call this quilt our "Memory Quilt," since we cannot see it without recalling years and events long previous to its making. It is the *raison d'être* for hoarding

bags full of old silk scraps, collected from generations of frocks, ribbons and ties.

We cannot leave the subject of quilts without quoting Eliza Calvert Hall, who has "Aunt Jane of Kentucky," a character in one of her books, say:

"How much piecin' a quilt is like livin' a life! Many a time I've set and listened to Parson Page preachin' about predestination and free will, and I've said to myself, 'If I could jest git up in the pulpit with one of my quilts I could make it a heap plainer to folks than parson's makin' it with his big words.' You see, you start out with jest so much caliker; you don't go to the store and pick it out and buy it, but the neighbors give you a piece here and a piece there, and you'll have a piece left over every time you cut a dress, and you take jest what happens to come. And that's like predestination. But when it comes to the cuttin' out, why, you're free to choose your own pattern. You can give the same kind o' pieces to two persons, and one'll make a 'nine-patch' and one'll make a 'wild-goose chase,' and there'll be two quilts made out of the same kind o' pieces, and jest as different as they can be. And that's jest the way with livin'. The Lord sends us the pieces, but we can cut them out and put 'em together pretty much to suit ourselves, and there's a heap more in the cuttin' out and the sewin' than there is in the caliker."

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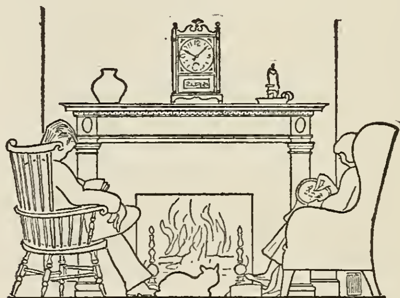
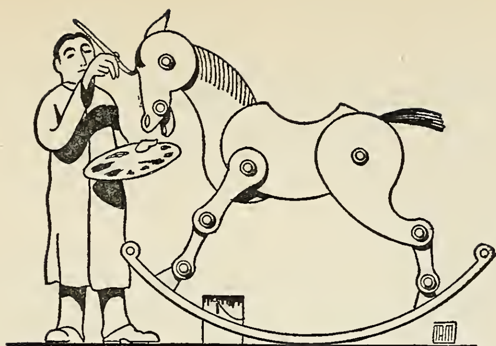




HOBBYIST'S WORKSHOP

MANY people are possessed with a mad desire to dip a brush into paint and attempt a masterpiece of their own every time they leave an art exhibit. It is the same instinct in others that inspires a craving for the woodworker's tools on viewing a fine piece of cabinet work, or for photographic paraphernalia after a visit to a studio showing work of strong appeal. This is perhaps best understood in children who want to do the thing they see others doing.

To such persons the desire to possess is secondary to the passion to create with their own hands, and nothing short of the physical effort can satisfy them. Unfortunately many who are desirous of creating cannot indulge themselves, but of those who can a large proportion allow their passion to cool off before it is gratified, because of a natural tendency to procrastination.

The most frequent excuses we hear are that they have no time; that they lack space in which to store the necessary equipment; that they are too old "to start anything," or,—amazing as it may appear to some of us,—some member of the household objects.

Latent talent is often undiscovered by reason of the suppression of a natural desire to express oneself; sometimes, however, late in life, the urge is so strong that it will not be denied and bubbles up and overflows, resulting in a creation of more or less merit. Every true work of art is the result of the indulgence of such a passion.

The average person could satisfy this instinct to create if he would but deny the Little Voice that whispers: "You haven't the time!" Any one can find the time who has enough of it to devote to other pursuits ouside of his business. As for the room,—it is surprising how little is needed and how easy it is to make, if only the will for it is strong enough. A small built-in cabinet or a closet can be fitted up in a compact fashion to meet the requirements of most of the hobby crafts. And age!—There is no such condition as that for the creator. If one is young enough to have an urge he is not too old to indulge it. Lastly, it should be evident that a more healthy state of mind and a consequent increase in amiability must be the result of pursuing such a hobby.

There are times when a longing to be alone creeps over one. This feeling is often coupled

with a bursting desire to "let off steam." It is at such times that a little corner workshop will hasten one's return to "normalcy."

SHIP MODELS

Not long ago Americans had a reputation for whittling. Rare was the village male who was not engaged in shaving a stick when the stranger would ask information from him. Comparatively few of these energetic wood-cutters could carve even indifferently well, although they whittled instinctively and at every opportunity. They obeyed an impulse without directing it. However, among the minority of those who could handle a knife with skill the retired old seamen of the clipper-ship days were most adept. These rugged old tars with horny hands would find a sentimental satisfaction in making a model of the ship to which they had become so attached, rigging it out with the utmost care and meticulous adherence to details. They, no doubt, roamed the seas again in their minds as they adjusted spars and yards, and in the models that have survived we can see the labor of love carved in every line.

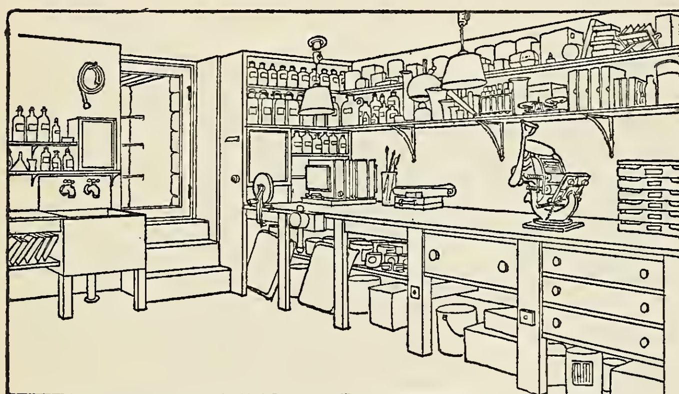
There is an indefinable fascination that the sea holds for some that is reawakened at the sight of these fine old ship models. The clipper-ship era of the forties and fifties is now far enough in the past to be cloaked with the glamour of romance. As a consequence, there

are books appearing on the subject which are eagerly read, and the old ship models are being sought by collectors the world over. Indeed the demand for these has been such as to justify the rise of a new industry,—the making of miniature ships for use as decoration in the home, as well as in the office. There are shops in the principal cities of the world to-day where the maker of ship models can buy for a few cents the parts that formerly required an hour to make by hand. Even special tools for this work are on the market.

The demand for old ship models has already nearly exhausted the supply and those in perfect condition cannot be purchased, except at high prices. Not long ago, good models were to be picked up for from seventy-five to a hundred dollars. To-day, five times that figure is not too much for fine specimens.

But the creative hobbyist who can work skilfully with tools is indeed fortunate. Damaged models can be picked up for half of the price of those in perfect condition, and by dint of spending pleasurable hours at restoration a beautiful object, rife in romance, is to be had. We were fortunate enough to acquire an original model of an old French barque of about 1840, not long ago. It was in bad repair, but our joy was unbounded on discovering the delicate workmanship and scrupulous fidelity to detail. It had been permitted to accumulate the dust of time in order to give the prospective purchaser the

proper credentials as to its age. We were lucky in possessing a workroom in which we could carry on the repairs, the necessary time spent on which we found only too short. Of course, we ignored the advice of the salesman and removed the dirt the first thing, exposing the rich mellow tones of the old wood of the deck and other parts, that had been all but hidden from view.



THE WORKSHOP (TEN MINUTES BEFORE COMPANY IS EXPECTED)

WORKSHOP

We find it necessary every now and then to enter our hybrid laboratory-workshop, which we have fitted up in a corner of our cellar. Here indeed is our universe where we are the Master, and where time has no significance. We have rigged up a workbench with vises, drawers for tools of various kinds, and with other conveni-

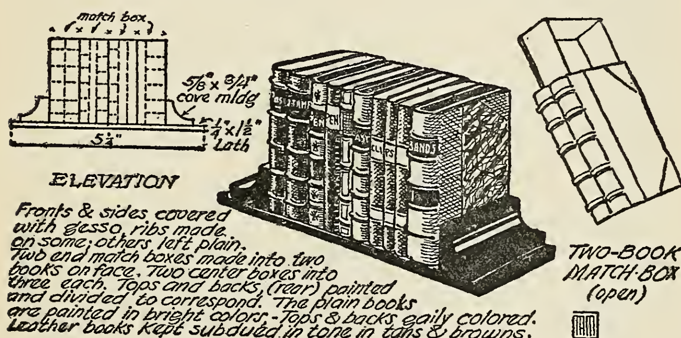
ences unnecessary to describe. There are shelves that can accommodate more than twice their theoretical capacity of bottles, boxes, cans and photographic equipment. It was after we had become familiar with the phenomena connected with these shelves that we learned the natural law governing the impossibility of finding anything sought, without first taking everything down.

GESSO

One evening we were engaged with experiments in gesso,—a plastic substance the composition of which is described further on. We had used this successfully as a ground for decorative painting. We had compounded it in accordance with the formula of an artist friend, but we sought a more suitable composition for applying to scale models of buildings and one which we could carve after drying. Gesso, if properly made, will stick to almost anything to which one would want to apply it, whether of wood, metal, glass or even cardboard. As a surface upon which to paint, either in oil or aquarelle, it is highly satisfactory.

We had made a batch in excess of our immediate needs, so we began using up the material, applying it to any object at hand that could be coated. Among the various articles thus treated were a dozen or more penny match boxes, half of which we fashioned into

shapes resembling miniature leather-bound volumes. These amused us and we finished them with an antique leather effect, placing five of them together on a lath, at each end of which we fastened a bit of molding. By this means we obtained the effect of a set of old leather books in a stand. The result hardly justified the enthusiasm with which they were received by our friends to whom we presented them, but



we were encouraged to experiment further until we had evolved the little desk sets illustrated. Each box is suitably titled and the set is used for stamps, fasteners, pens and rubber bands. When the sets contain five boxes we include one for seals.

But gesso is not a new invention. It was used by the ancient Egyptians, Greeks and Romans for decorative effects. It affords the creative hobbyist, with a knack for modeling or painting, no end of amusement. It consists of ingredi-

ents of varying proportions, our favorite formula being as follows:

FORMULA FOR MAKING GESSO

Two batches are made. The first consists of white lead, whiting and zinc white in the proportions of 1:2:3. These are thoroughly mixed together and either raw or boiled linseed oil added until the entire batch is even and smooth in a fairly stiff paste. The grinding should be thorough, to avoid gritty composition. This batch is then put to one side, and the second batch is made. This consists of whiting and zinc white in the proportions of 1:3, thoroughly mixed, hot glue being added until, after grinding to perfect smoothness, a fairly stiff paste is had. We have found cabinetmaker's glue to give the best results, but the smell is so unpleasant that we use instead the regular bottle glue to be had at a five-and-ten cent store. The first batch is gradually added to the second, until the right consistency, to be determined by experience, is obtained. The mixture should resemble "lime putty" (lime gaged with plaster-of-paris which is used for coating walls). If it is too short, it will crumble on drying. If it is too rubbery, it will not adhere to its base and will be difficult to work. The mixture will keep for days if tightly sealed, although the glue has a tendency to hasten the drying. A palette knife will be found to be the most convenient tool for

applying the gesso. In fact, broken palette knives, ground to various shapes, are useful for moldings, curves, etc.

PROCESS FOR MAKING PICTURES

An illustrator [1] once showed us a process that should be of interest to the creative hobbyist. It was a simple system for making pictures of subjects such as street scenes, boats, buildings, trees and even portraits, but it involves the use of an enlarging apparatus of some kind. However, any one who has a camera can adapt it to such a use with little difficulty. We strongly recommend the use of an inexpensive lens, in lieu of the regular one, as the heat can cause the latter considerable damage. The process, which is in some respects similar to enlarging on bromide, familiar to most amateur photographers, is less complicated to perform than to describe. The process which we follow is virtually the same as explained to us by the illustrator, although we have improved upon it in some of the details.

The enlarging apparatus is fixed in such a position as to project the image downward onto a table, or, if necessary, the floor, to which we have fastened our drawing paper with thumbtacks. The film selected is arranged as in photographic enlarging, and the focus adjusted. A paint brush is then used for applying a solution of dextrin

[1] Ralph T. Willis.

or British gum and mineral black to all of the darker portions of the projected image. If the outlines have been carefully followed, the paper will show an image which will look like an enlarged negative, but with no detail. After the dextrin mixture has had time to dry a waterproof ink or pigment, ground thoroughly in some vehicle impervious to water, is blown on with a siccatif tube or air brush. This will produce a pleasing stipple of minute blots over the entire surface.

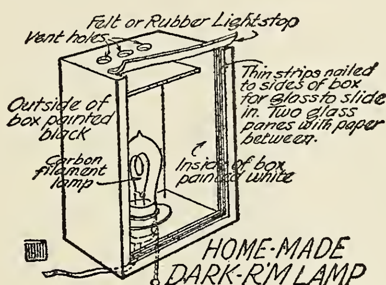
The paper is then immersed in a bath of lukewarm water and allowed to soak. It is at this stage that the thrills begin. Bit by bit, the portions painted with the dextrin detach themselves from the paper and float off in the bath, leaving the picture exposed to view for the first time. It will be, of course, a silhouette in stipple and white. It is only necessary now to add a touch here and there of black or other solid color to the deepest shadows to have a three-tone picture. The process can be carried through several successive stages by means of stopping out the parts that are dark enough, and proceeding to blow on more pigment where deeper tones are thought desirable. A little practise with this process should develop sufficient technique to produce charming pictures devoid of all mechanical appearance.

We have put the same apparatus to another use,—that of furnishing the image on paper or canvas, from which we could trace the main

lines and proportions of such complicated subjects as cathedrals. This saves a lot of dreary preliminary work, and permits us to begin painting before our ardor for the subject wanes.

COMFORT IN THE DARK ROOM

While on the subject of enlarging, the inconvenience of working in obscurity while developing prints is altogether unnecessary. Safe dark-



room lighting can be had by the simple expedient of increasing the number of lanterns. We have three of these going during our operations, and we use a ruby-glass cap over the lens while adjusting the paper on the easel. We made these lanterns at practically no cost. Old boxes were converted, as shown in the drawings, the only suggestion we need add being that carbon lamps seem to last better than the tungsten or nitrogen type. One lantern over the developing tray and and the other two placed where they will best

serve to illuminate the dark room, eliminate the nuisance of groping for the thing you happen to want in a hurry.

ETCHING

Etching is the creative hobby requiring less space for tools than any we can think of. Nor is there any hobby that can afford more pleasure, once the beginner has mastered the initial difficulties. Although a fine art, etching is a mystery to most people, whereas, painting is indulged in by those in nearly every strata of human society. The necessary equipment for the painter, whether in oil or aquarelle, is certainly no less complex than that of the etcher, and there is nothing costly about the latter. It is most essential to become imbued with the spirit of the etcher's needle, in order to understand, in a superficial way, some of the limitations of the art, and one visit to some good collection would be followed up with many others, stimulating the,—if we may be pardoned,—itch to etch. The reader is referred to the chapter on print collecting.

The entire equipment necessary for the etcher consists of so few articles that they would easily fit into a space no larger than half a bureau drawer. The only bulky article is the press, which rarely forms part of the etcher's outfit, the pulling of proofs generally being performed by professionals specializing in that work. The

tools consist of: etcher's needle, drypoint, burnisher, scraper, hand-vise, hammer, tray for acid-bath, wax tapers, etching ground, ink dabber, bottle of acid, measuring glass and funnel. A small anvil is most useful. The etcher himself often makes a large part of his outfit, especially as he becomes more conversant with his needs. Copper plates of the proper degree of hardness can be bought of any reliable dealer in etcher's supplies. In the beginning, we recommend using small plates, about 4″ x 6″.

TYPE-SETTING IN THE DINING ROOM

Of all the unlikely places to carry on printing as a hobby, we would name, offhand, the dining room of a New York apartment. However, one evening, while visiting at the home of a journalist friend, we were shown what was concealed in back of an innocent-looking screen. We were astonished to see a compact, neatly arranged chest of type-cases, containing about a dozen fonts of type. Their owner was a real enthusiast, and when he modestly exhibited some forms he had printed in English and French, with various type faces, we marveled at his work, as well as his neatness and ingenuity.

Only a journalist could have conceived the idea of such a simple system as he has adopted. He does his composing (type-setting) at home, locking it up in a chase,[2] taking it downtown to

[2] A chase is an iron frame made to hold the type in the press.

the establishment of a small job printer, in the corner of whose pressroom he keeps his own private press and accessories. Here he does all his own printing when he feels inclined, paying the proprietor of the place a nominal rental for the obvious privileges and advantages he derives.

In our own workshop we have a small printing outfit, fairly complete with a half dozen fonts of type. We find this a source of amusement at times, but admit of a certain dislike to observe the good rule concerning assorting type as soon as it has served its need.

We call attention to a number of creative hobbies for the home in our chapter on "Fireside Hobbies," which are usually pursued by the womenfolk. Among the various creative hobbies, which can be taken up in addition to those referred to in that and in this chapter, we would name: woodworking, bookbinding, leather tooling, metal working, china painting, pottery, wood carving, modeling in clay and, if the subject is not an unfamiliar one, experimental chemistry.

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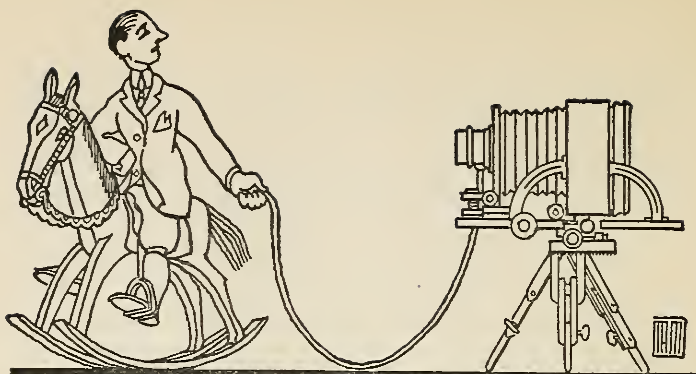


PHOTOGRAPHY

THE most poignant form of loneliness is experienced by a sensitive person when surrounded by people, people with whom there can be no intercourse other than an exchange of superficial words. Such condition does not necessarily reflect on the intelligence or conversational powers of either the people or the person, but constitutes a natural situation when one's mind is preoccupied with thoughts and emotions relating to abstractions which cannot be satisfactorily expressed in words.

The most exhilarating companionship that can be had is between two people who converse with an almost penurious economy of words and yet succeed in expressing themselves to one another with completeness of thought. It is such companionship that we seek and so seldom find. It is this companionship that is necessary to our

happiness and without which our world becomes a dark and gloomy cavern haunted by the mocking echoes of our own lonely thoughts.

Fortunately there is, among those who understand, a broadcasting system not unlike the modern radio, which enables one to express emotions in such a manner that any one with the proper receiver, sympathetically tuned, may receive the message. Thus one may broadcast his thoughts with the assurance that some unknown friend will hear them and understand. Christopher Morley says, "Art is communication; it requires not merely a sender but also a recipient." [1]

SEEKING A MEDIUM FOR SELF-EXPRESSION

We all seek some medium of self-expression. Unfortunately it is commonly believed that only to a chosen few is given the strength to climb Mount Parnassus. True, there is no funicular making easy the way to the summit, but there are trails which have been blazed by those who went before.

It is interesting to note the forms that self-expression take, particularly the pathetic and ridiculous attempts at expression through inadequate mediums. The man of affairs who attempts to use his business as a means of expression generally finds himself in a blind alley, and not infrequently accompanied by the sheriff. Some men do leave the imprint of their per-

[1] "Inward Ho," by Christopher Morley.

sonality on their business to its decided advantage. Labor reforms and revolutionary methods in manufacturing and organization are due often to the individuality of a man asserting itself in this direction.

We know a man who manufactures a food product which is principally used by poor people, yet this man chooses as one of the mediums of advertising a newspaper of limited circulation, which is almost exclusively read by men interested in financial matters. The newspaper is read by the food manufacturer's personal friends and this advertising is to him but a method of self-expression. Many of the idiosyncrasies of the man are to be detected in the advertising copy. This is one of the inappropriate ways of self-expression utilized by business men.

Women, too, often are troubled for a medium of expression. A woman can introduce her personality into her home with beneficial effect both to herself and to her home, but often she overtaxes this medium and her conversational activities soon degenerate into an orgy of pots, pans and servant girls.

PHOTOGRAPHY—AN ARTISTIC MEDIUM OF EXPRESSION

There is no better method of expressing oneself than through the good offices of a creative hobby, nor is there any more accessible hobby for this purpose than photography. Photography

is an artistic medium of expression which eliminates much of the laborious training of the artist, but which nevertheless calls into play artistic impulses and permits a wide latitude of interpretation. The man or woman who has no time for the long and arduous preliminary study and practise of drawing that the artist must undergo, may commence photography on the same level as the artist who has already mastered the craftsmanship of drawing. From that point on the natural appreciation of things artistic enters more largely into both drawing and photography than does the mere craftsmanship which comes of long practise.

RECORD PHOTOGRAPHY

There are two kinds of photography; that which is solely to make records of places and events, and the other which has in view interpretation and expression. The first will serve the serious photographer both as a pleasant reminder of his travels and adventures, and act as a sort of notebook for collecting ideas for interpretative photography. Little need be said of record-photography, for the "picture ahead" slogan, with all its 'whys' and 'hows' has been thoroughly taught to Americans at the expense of millions of dollars in advertising. We would recommend, however, that for this type of photography the small vest pocket camera be considered. It is at once convenient to carry, inexpensive to oper-

ate and satisfactory in results. The universal focus, while having certain disadvantages such as oversharpness and lack of depth, has the advantage of being always ready and enabling one to photograph those fleeting moments which do not even permit the time for focusing, and which are usually so desirable to have permanently recorded.

INTERPRETATIVE PHOTOGRAPHY

Record-photography is really the recording of the outward appearance of things which we wish to remember. Interpretative photography is the recording of emotions or abstract ideas suggested by or seen through something tangible. There may be a friend who arouses in us certain ideas, let us say the idea of nobility. It is possible, by means of photography to express this idea of nobility. It cannot be done, however, by merely having our friend stand on his front steps, face the sun, say to him, "Please hold still a moment," snap the picture, and then send the film or plate to the corner drug store to be developed and printed. As a matter of fact we are not photographing our friend, but rather the abstract quality of nobility. We must prepare to do this with the same care that an artist would use. First the pose and composition must be carefully considered, then the length of exposure, and the degree of sharpness or blur must be decided upon, all of which may require

ten or a dozen trial exposures, after which the developing and printing must have our attention. It often becomes necessary to depart from physical verity in the developing or printing of the picture in order to express more clearly something abstract.

LANDSCAPES

The record-photographer, when photographing landscapes, usually chooses a subject that has great sensuous beauty, something striking and perhaps unusual. The interpretative photographer will often choose some ordinary scene, perhaps a group of trees, a field, a bend in a river, tall buildings through rain or mist or maybe just a country road, with which he creates an atmosphere suggestive of some thought or emotion.

Paul L. Anderson says: [2] "The emotions which may be expressed or stimulated by means of landscape photography include practically all those which lie within the province of graphic art, but most easily stimulated are those of a quiet character, such as calm, peace, sadness, wonder, reverence and the like, though, as has been said, reverence is probably too great for the photographer, and, indeed, is generally beyond the grasp of the painter as well. Joy, whether the simple joy of living or rejoicing over some definite condition, such as warmth

[2] "The Fine Art of Photography," by Paul L. Anderson.

or light, is also easily attained, but is not so deep an emotion. The stronger ones are the quieter, a violent emotion such as extreme joy or horror, though more impressive at the time, being less apt to leave a deep impression on the mind, in which respect the pictorial representation differs from the actual experience. Generally speaking, the quieter emotions are the pleasanter to live with, and unless a picture is designed to procure an immediate and powerful effect . . ., it is better to avoid violent expression."

GUM-BICHROMATE PRINTS

One of the most fascinating means of self-expression in photographic fields is in making gum-bichromate prints. We are aware of the obstacles connected with their production, but a good print done in this manner cannot easily be excelled for softness and suggestiveness. One must have plenty of space in which to work, a drawback that limits its widespread popularity. The picture should be large in order to give an appropriate effect, and this necessitates the making of a negative 8″ x 10″ or larger,—another objection and reason for its lack of popular appeal. But where the hobbyist is determined he will be well rewarded for the trouble he takes.

We have always used a good drawing paper, a hot-pressed (smooth) or a cold-pressed (rough surface), the principle being the same with

either. However, a "sized" paper is a labor-saver. The paper should be marked on one side, and cut to the proper dimensions before coating. The coating solution is made by dissolving without heat an ounce of gum arabic in 1½ ounces of water,—a process that may consume a couple of days. A saturated solution of potassium bichromate is then prepared and poured into a tray. In this the paper is carefully immersed, avoiding air bubbles, and is then hung up to dry in a dark closet. The next evening the paper is ready to coat with the gum mixture.

A small amount of water-color paint is squeezed from a tube into a saucer and dissolved in the gum solution with enough water added to coat the paper. The mixture should not be too fluid. Experience will best teach the right proportions. A wide flat brush is used to apply the gum mixture to the paper, on the surface which was coated with the bichromate. The coating should be even and thin. The appearance at this stage may discourage the beginner, but it has no connection with the final result. The coated paper is now hung up to dry and in a couple of days is ready to use. The printing is done in the same manner as employed with any of the printing-out papers, and is complete when the details are just visible through the paper, looking through it toward the light.

Development is done in daylight, in a tray of cold water, frequently changed until the print is appreciably lighter. A print that has been

over-exposed is not ruined beyond redemption, but those that are under-exposed are hopeless. If the print is over-exposed the water should be made warmer to dissolve the gum. As the print gradually clears, the high lights may be strengthened by gentle swabbing with a brush. A river may be made to appear on a picture at a spot where none existed; clouds may be made where there was a clear sky; trees may be heightened in sunshine where they were dull dark masses,—in fact, the manipulation of the picture is at the will of the maker.

BROMOIL PRINTS

To-day, the most popular process in interpretative photography is the bromoil print. The bromoil print is simply a bromide print, generally an enlargement from a small negative or portion of a negative, in which the developed silver image is bleached out and rebuilt in a fatty ink or pigment which is applied to the bleached print with a brush or roller. It is in this rebuilding of the picture-image in pigment, brush in hand, that the photographer can exercise control over the finished print which is characteristic of the process.

John A. Tennant[3] says of the bromoil process: "This substitution of a pigment image in place of the silver image is as absurdly simple in theory as it is complex and uncertain in prac-

[3] "The Photo Miniature," Volume XVI, Feb.-May, 1922.

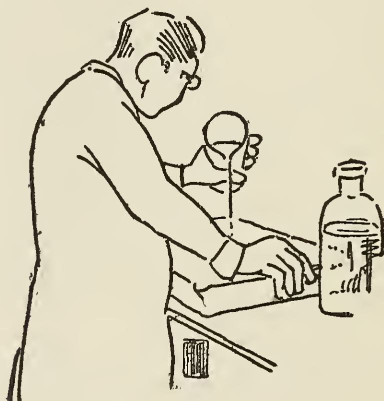
tice. It is based on the fact that gelatine will absorb water and swell, in which condition it will repel an oil or fat. When the developed gelatine bromide print is placed in the bleaching solution, this exercises a tanning (drying or hardening) action on the gelatine film in every part of the image where there is silver deposited. This tanning action is proportional to the amount of silver deposited in the different parts of the image. As a result, when the bromide print thus proportionately tanned (and incidentally bleached) is soaked in water, the swelling and relief of the image will vary with the tanned and untanned areas of the print, and the tanned portions will 'take' an oil or fat instead of repelling it as the untanned (and swelled) portions do. If now a colored fatty ink, made by mixing a color pigment with oil, is applied to such a wetted and swelled print we will get a visible record in pigment of the unswelled or tanned portions. This is the pigment image of the bromoil print and it is also a facsimile of the original silver image of the bromide print on which it is based."

The advantage of this process is not only in the latitude permissible in applying the pigment, but in the fact that a number of transfer prints can be made, not unlike lithographs. To transfer the image, the freshly inked bromoil print is placed in contact with a sheet of drawing or other paper, under pressure. Six or more transfers may be made from one bromoil. Each

transfer of course requires the re-inking of the original bromoil print.

Arthur W. Wilde once wrote,[4] "In taking my pictures I never start out to think of any technical points of good photography, but aim at reproducing as near as I can how nature appears to my temperament." We consider that as a pretty good basis to work on with a camera or with any other instrument of self-expression.

[4] "American Amateur Photographer," Sept., 1902.



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COLLECTING

PLAYING CARDS

CARD playing, although most generally indulged in, is not a suitable hobby for the average person, unless it be combined with something else. The man whose sole hobby is card playing is inclined to become narrow and circumscribed in his habits of diversion. Let it be understood that card playing is an interesting and diverting hobby, but many persons become so interested in playing cards that they have neither time nor inclination for any other diversion. These people require a hobby to take them from cards, for the same reason that some people require a hobby to wean them away from over-indulgence in business. For the person with a genuine and intense interest in card playing, there is no happier hobby than collecting old playing cards.

INVENTED FOR AN INSANE KING

We will be accused by card players of being unkind when we state that cards were invented about the year 1392 to amuse Charles VI, the insane king of France. They perhaps will refute the statement and claim that cards were known in Belgium in 1379 and that a Swiss monk, Johannes, stated in a manuscript, now in the British Museum, that the game of cards was introduced into Switzerland in 1377. Others will claim that they were originated in Venice, and some will say Italy. We, however, like to believe that the game was invented for the insane king of France.

TAROTS

The pack used in Venice at the beginning of the fifteenth century consisted of 78 cards, of which 56 were numerals and 22 were emblematic. The numerals consisted of four suits, each consisting of four court cards, the King, Queen, Chevalier and Valet, and ten cards numbered from one upwards. The emblematic cards were handed down from much more remote times, and were probably a survival of cards originally used for divination, a practise not uncommon to-day. Such a pack of cards was called a pack of tarots, because they were taroté, or marked with diagonal crossings on the back. The emblematic cards were higher in value than the others and were called trumps. Later the

ATOUTS OF AN EARLY ITALIAN PACK OF TAROTS FROM "PROPHETICAL, EDUCATIONAL AND PLAYING CARDS," BY MRS. JOHN KING VAN RENSSELAER.

emblematic cards were abandoned and the pack was reduced to 52 cards by eliminating one of the court cards. The suits of the French, Spanish and Italian cards consisted of Swords, Cups,

Batons and Money. The old English cards of the fifteenth century, as well as the German and some modern Portuguese cards, had suits consisting of Hearts, Bells, Acorns and Leaves.

EARLY FRENCH CARDS

The French cards of the sixteenth century, with their Coeur, Tréfle, Pique and Carreau became the modern Heart, Club, Spade and Diamond. The spade is derived, in form, from the German sign of the leaf, and in name from the Italian "spada," which name was given to their corresponding suit, Swords. The form of the club is derived from the German acorn, and the name is the translation from the Italian. The German heart is still used without change, and the diamond is the alteration of the bell.

CARDS DESIGNED WITH WOODCUTS

Although the early cards were stenciled and extremely crude in design, the engravers soon gave some attention to the possibilities of artistic representation on cards. Arthur Hayden says, "Italian, French and German masters did not disdain to employ their genius to illustrate the pack of cards. In consequence, there are some fine designs beloved by collectors and exceedingly rare. Some woodcuts after the designs in the style of Lucas Cranah are of particular beauty, depicting Acorns and Leaves with Chevaliers in contemporary costume.

ATOUTS OF AN EARLY ITALIAN PACK OF TAROTS FROM "PROPHETICAL, EDUCATIONAL AND PLAYING CARDS," BY MRS. JOHN KING VAN RENSSELAER.

"About 1510 Erhard Schon is known to have engraved a pack of cards with suits of Flowers, Pomegranates, Leaves and Roses, and a portion of this pack is attributed to Hans Sebald Beham.

But for delightful designs those of Jost Amman of the sixteenth century claim recognition by reason of their strong and virile line. They were engraved on wood and published at Nuremberg in 1588. There is some reason to suppose that these cards were not put to the common use of play, but remained unpublished as cards, being the dream pack of the designer. The suits are Books, Printers' Inking Balls, Wine Cups (displaying fine goldsmiths' designs), and Goblets of glass or faience. The suits are unusual, and possibly this acted detrimentally to their practical adoption. No cards have been found with these actual designs."

CARDS IN THE XVII AND XVIII CENTURIES

During the seventeenth and eighteenth centuries, playing cards were embellished with cartoons satirizing political, historical and social events. The French cards, depicting historical events, continued until the early part of the nineteenth century.

During the French Revolution many interesting variations were made to the King and Queen in the playing card pack, to satisfy the republican spirit of the time.

In 1806 there appeared Cotta's Card Almanack, which contained illustrations of fanciful designs for cards. This Almanack continued for a few years.

In the nineteenth century cards were published containing advertisements, also depicting

the prevailing fashions. These cards are interesting to students of costume.

Mrs. John King Van Rensselaer has made the collecting of old playing cards one of her pet hobbies. She has gathered together some rare and beautiful specimens from various corners of the globe and has made them the subject of many interesting chapters in her authoritative books.

AMERICANA

Collecting playing cards may be added to the many interests of the general collector of Americana. In the United States there are some fascinating historical cards. One pack commemorates the war of 1848 with Mexico, and in place of the Kings appear the generals of that war. On the Aces are views of well known country places. One is the headquarters of General Washington at Newburgh; another is Highwood, the residence of Mr. James Gore King on the Hudson River at Weehawken, opposite Forty-second Street, New York.

There is a pack of cards of 1863 picturing the battle between the "Monitor" and the "Merrimac." The court cards are soldiers in the uniform of the day, such as zouaves, etc.

Modern cards are the result of gradual evolution of these earlier varieties.

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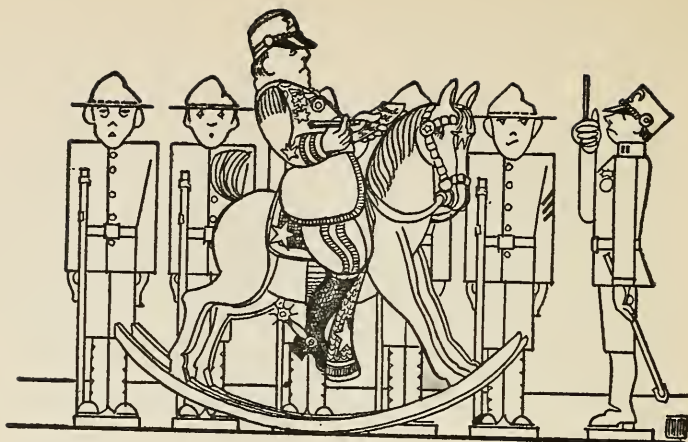

Collecting Autographs

"At Davey's in Great Russell Street, were autographs galore,
And Mr. Davey used to let me con that precious store.
Sometimes I read what warriors wrote, sometimes a king's command,
But oftener still a poet's verse, writ in a meagre hand.
Lamb, Byron, Addison and Burns, Pope, Johnson, Swift and Scott,—
It needed but a paltry sum to comprehend the lot;
Yet, though Friend Davey marked 'em down, what could I but decline?
For I was broke in London in the Fall of '89."

—*Eugene Field.*

WE always value people in the currency of our own minds. If we are religiously inclined, our opinion of other people is summed up in units of religion. Those of us who consciously strive for power and eminence view

other people in the light of these qualities. Have you not found it to be true, that when you ask a man, immersed in business, what he thinks of Timothy MacDuff, his reply most frequently is, "Rated AAA in Bradstreet's." The golfer considers a man in strokes above or below par. The butcher judges you and your family in terms of filet mignon or hamburger steak. To the collector of autographs, the value of a man is the value of his autograph. Ex-Kaiser Wilhelm II is disdained by autograph collectors, not because of character or that he caused the war, but rather that his autographs are numerous and flood the market. Not so with the Crown Prince; his autograph is scarce and much to be desired. "An unjustly judged man," so one autograph collector informs us.

A FASCINATING HOBBY

Collecting autographs is a fascinating hobby, if only for the reason that it gives us a new standard for judging our fellow men. We are all fond of usurping the Lord's prerogative of judging men, and lacking divine wisdom in our judgments, we must fall back upon man-made standards.

Without doubt an autograph does carry with it something of the personality of its author, and in collecting them we gather around us an interesting group of men and women. There are a number of fortunate collectors who have

brought together autographs of all the signers of the Declaration of Independence. To them it is but little less than the privilege of perpetual companionship with that group of patriotic, daring men who brought our country into being.

WHAT AUTOGRAPH COLLECTING ISN'T

There is a popular misconception about autograph collecting which considers it to be the infantile practise of acquiring a blank book marked "Autographs," and then asking people to write their names in it. This is not autograph collecting. Nor is the practise of cutting signatures off letters, autograph collecting. The latter may be considered autograph destroying. The autograph collector endeavors to secure a representative letter or manuscript in the handwriting of the author and containing his signature. Of course, as a last resort, a signature alone is better than nothing. Typewritten letters, with merely an autographed signature, are not considered good specimens.

SPECIALIZATION

Specialization is desirable in autograph collecting, as in other forms of collecting. It simplifies the hobby, and adds zest to it. Ashley T. Cole, a prominent lawyer, has made a most interesting specialty—collection of the autographs and pictures of the Lord Chancellors of

England and the Chief Justices of the United States. The autographs consist, wherever possible, of autograph letters, signed, or, as the collectors term them, "A. L. S.".

Collectors frown, or pretend to frown, on the habit of writing to prominent persons requesting their autographs. The orthodox way of acquiring autographs is to buy them or to be fortunate enough to correspond "legitimately" with some man whose autograph is valued. Autographs may be purchased from dealers or bought at auction, but it is our opinion that autographs may also be requested, providing tact and diplomacy are used. The orthodox collector, who cries down the practise of requesting autographs, shuts his eyes to the fact that many valuable autographs which he purchases have been stolen. A large percentage of the autographs of royalty, high officials, generals and other dignitaries that are on the market to-day have been stolen from public records by the petty officials in charge of them. It is the only possible way in which they could have fallen into the hands of the collectors.

METHODS OF PROCURING

A good method of procuring foreign autographs is to write to the American Consuls abroad and request the names of autograph dealers in their districts, with whom you can correspond. If you write to a public man re-

questing his autograph, be sure to enclose a stamped self-addressed envelope, also remember that he may have many requests every day for autographs and that you must word your letter so that it will carry with it a genuine appeal, otherwise you will probably be disappointed. One collector we know sends photographs of parts of his collection, which might interest the man from whom he requests an autograph, and incidentally shows him the extent of his collection, and the seriousness of his pursuit.

THE KIPLING STORY

Rudyard Kipling has a reputation among autograph collectors for being adamant in his refusal to grant requests for autographs. It is told of one collector who, having failed in numerous quests for an autograph from Kipling, had hit upon a plan which he thought certain of success. He had read that Kipling received one pound sterling per word for his writing. Therefore, this ingenious collector sent Kipling a money order for one pound and requested that he send in return "one word at your usual rate, for which find enclosed money-order." Two weeks later the autograph collector received his self-addressed envelope bearing an English stamp. Upon opening it, he found a card on which was written in the hand of Kipling just one word, "Thanks."

A nation that does not protect its citizens both at home and abroad cannot long endure.

John J. Pershing
Brig. Gen. U.S. Army
Fort Bliss.
Jan. 23 1916.

To
The armies under Foch (the great genius of France).

"Who, all beneath his high command,
Harmoniously,
As arts or arms they understand,
Their labors ply"

Geo H Cameron
Maj Gen. U.S. Army

Mar 6/18

Sincerely
P. C. March
Major General

Our Country cannot do too much for our returning soldiers who have shown on the battle fields of France such bravery, fortitude and patriotism.

James W. McAndrew,
Major General U.S.A.,
Chief of Staff, A.E.F.
Chaumont, France,
January 20, 1919.

France, Aug. 7th 1918,

Your request for my autograph makes me feel that you appreciate the work being done by our soldiers in France so that I am sure you will also understand how proud I am to have commanded such men.

J. G. Harbord
Major General, N.A.

Headquarters
V Corps, A.E.F.
Oct 24, 1918.

My dear Mr. Cole,
Our country can not be too proud of its soldiers who are fighting with a courage and a self-sacrificing devotion to duty that have not been surpassed in warfare.

Very truly
C. P. Summerall
Maj. Gen. Comdg. V Corps.

My dear Mr. Cole
My good wife tells me that I am just a plain Dutchman — absolutely without sentiment.

Very sincerely yours.
Adelbert Cronkhite,
Major General.
Hdq. 9th Corps,
St. Mihiel,
Dec. 28, 1918.

MR. COLE TELLS A STORY

Mr. Cole tells an interesting story in connection with his autograph hunting. Like all collectors, he has "hunches," and when he read of the proposed flight around the world of Sir Ross Smith and his brother, Sir Keith Smith, who had already distinguished themselves by flying from England to Australia, he felt that he must immediately request their autographs, if he were to have them at all. A letter was dispatched to them at once. About ten days later Mr. Cole was grieved to read in the newspapers that Sir Ross Smith had been killed in a flight at Brooklands, England. Another ten days elapsed, and Mr. Cole received a letter bearing the insignia of the Royal Flying Corps. Contained therein were the requested autographs of Sir Ross Smith and Sir Keith Smith. They were dated Brooklands, April 12th. The envelope was postmarked April 13th. Sir Ross Smith met his death at dawn on April 13th.

GREAT WAR AUTOGRAPHS

Had Mr. Cole been guided by the collector's dictum against requesting autographs, he could not have gathered his invaluable collection of Great War autographs. He has the autograph of practically every allied admiral and general of the War, and is gradually securing the autographs and sentiments of the German commanders. They form a unique and valuable addition

to the history of the Great War. The following are taken from his autographs of Army and Army Corps Commanders, etc., of the American Expeditionary Forces:

"France, Aug. 7, 1918.
Your request for my autograph makes me feel that you appreciate the work being done by our soldiers in France, so that I am sure you will also understand how proud I am to have commanded such men.
J. G. Harbord, Major General, N. A."

"Our country cannot do too much for our returning soldiers who have shown on the battlefields of France such bravery, fortitude and patriotism.
J. W. McAndrew,
Major General U. S. A.
Chief of Staff, A. E. F.
Chaumont, France,
January 20, 1919."

"December, 1918.
The greatest problems of a war are not always settled in the field of battle.
(Major General) Chas. G. Treat,
Amer. E. F.
Padua, Italy."

"Washington, Jan. 9, 1919.
On my return to the U. S. after 17 months of active service in France, I desire to testify

to the excellent conduct and bearing of our forces over there, and to express my appreciation of the beautiful way in which the good people of the U. S. responded to every call made upon them, their self-sacrifice and devotion.

CHAS. T. MENOHER, Maj. Gen'l."

"A nation that does not protect its citizens both at home and abroad cannot long endure.

JOHN J. PERSHING,
Brig. Gen. U. S. Army.

FORT BLISS,
Jan. 23, 1916."

"MY DEAR MR. COLE,

My good wife tells me that I am just a plain Dutchman—absolutely without sentiment.

Very sincerely yours,
ADELBERT CRONKHITE, Major General.

Hdq. 9th Corps,
St. Mihiel, Dec. 23, 1918."

"To

The Armies under Foch (the great genius of France)

'Who, all beneath his high command,
Harmoniously,
As arts or arms they understand,
Their labors ply.'

GEO. H. CAMERON,
Maj. Gen. U. S. Army."

The following is from Mr. Cole's collection of American Division Commanders' autographs:

> "The battle of Saint Mihiel is just over, and I am writing this, full of pride at the courage and dash of the American soldier.
>
> JOHN E. MCMAHON,
> Major General, Comdg. 5th Division.
> Sept. 19, 1918."

The gathering of such a complete collection, part of which is published here, is not an easy task, but is well worth the labor for the pleasure to be had in its ownership.

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The End

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